

JNU FLOAT POND IMPROVEMENTS

VOLUME I OF III

Contract No. BE18-053

File No. 2011

Part I General Contract Provisions

Part II Technical Specifications



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OBTAINING CONTRACT DOCUMENTS. The Contract Documents are entitled:

JNU FLOAT POND IMPROVEMENTS CBJ Contract No. BE18-053

The Contract Documents may be obtained at the City & Borough of Juneau (CBJ) Engineering Department, 3rd Floor Marine View Center, upon payment of \$150.00 (non-refundable) for each set of Contract Documents (including Technical Specifications and Drawings) or may be downloaded for free at the CBJ Engineering Department webpage at: www.juneau.org/engineering

PRE-BID CONFERENCE. Prospective Bidders are encouraged to attend a Pre-Bid conference of the proposed Work, which will be conducted by the Owner and Engineer, at 10:00 a.m. on September 7, 2018, in the Alaska Room at the Juneau International Airport, 1873 Shell Simmons Drive, Juneau, Alaska. The object of the conference is to acquaint Bidders with the bid documents and site conditions. Conference call capability will be available for the Pre-Bid meeting. Proposers intending to participate via conference call shall notify Caleb Comas in the CBJ Engineering Contracts Division, at (907) 586-0878, or caleb.comas@juneau.org by 4:30 p.m., September 6, 2018.

DESCRIPTION OF WORK. Work to be completed is defined by the Contract Documents and generally consists of the following:

BASE BID:

Base Bid WORK generally consists of major improvements to the float pond outlet pipe and valve control structure including – but not limited to - the following: removal and replacement of existing asphalt paving; removal and disposal of existing CMP culvert; removal, salvage and re-installation of existing debris gate and modular concrete blocks; removal and replacement of chain link fencing; temporary fencing and flagging controls; construction surveying; excavation, dewatering, backfill and stabilization; temporary lowering of the float pond water level; new debris gate; slip lining and grouting an existing culvert; HDPE pipe; cast in place concrete valve vault; shut-off valve with electrical actuator and controls; topsoil and hydro seeding; erosion and sediment controls; and other miscellaneous related improvements.

ADDITIVE ALTERNATE ONE:

Additive Alternate One WORK generally consists of the removal and disposal of an existing debris grate and modular concrete blocks; new flapper gate lift system and concrete support wall improvements.

ADDITIVE ALTERNATE TWO:

Additive Alternate Two WORK consists of providing a trailer mounted generator per Electrical Item L-100 General Electrical Installation and Equipment.

COMPLETION OF WORK.

Closure of the Float Plane Pond will be required during construction. The Float Plane Pond is scheduled to be closed from December 1, 2018 thru April 1, 2019. **Substantial completion must be achieved on or before April 1, 2019 to coincide with the re-opening of the float pond.** All work associated with the installation of the slip-lined 36-inch HDPE pipe, the concrete vault, the shut-off valve/actuator, the electrical control panel, the modifications to the existing flapper gate and lift system, the removal of all temporary fencing and the repair of the Emergency Vehicle Access Road (EVAR) must be complete at that time. **Final Completion must be achieved on or before May 31, 2019.** All work associated with the asphalt pavement patching within the seaplane base access road must be complete by that time.

DEADLINE FOR BIDDER QUESTIONS: September 11, 2018.

DEADLINE FOR BIDS: Sealed bids must be received by the Purchasing Division **prior to 2:00 p.m., Alaska Time on September 18, 2018,** or such later time as may be announced by addendum at any time prior

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to the deadline. Bids will be time and date stamped by the Purchasing Division, which will establish the official time of receipt of bids. Bids will be opened immediately thereafter in the Assembly Chambers of the Municipal Building, 155 S. Seward Street, unless otherwise specified.

Bid documents delivered in person or by courier service must be delivered to:

PHYSICAL LOCATION:

City and Borough of Juneau, Purchasing Division
105 Municipal Way, Room 300
Juneau, AK 99801

Bid documents delivered by the U.S. Postal Service must be mailed to:

MAILING ADDRESS:

City and Borough of Juneau, Purchasing Division
155 South Seward Street
Juneau, AK 99801

Please affix the label below to outer envelope in the lower left hand corner.

IMPORTANT NOTICE TO BIDDER		
To submit your Bid:		
1. Print your company name and address on the upper left corner of your envelope.		
2. Complete this label and place it on the lower left corner of your envelope.		
S	BID NUMBER:	B
E	<u>BE18-053</u>	I
A	SUBJECT:	D
L	<u>JNU Float Pond Improvements</u>	
E	DEADLINE DATE:	
D	SEPTEMBER 18, 2018	
	PRIOR TO 2:00PM ALASKA	
	TIME	

Mailing/delivery times to Alaska may take longer than other areas of the U.S. Late bids will not be accepted and will be returned.

SITE OF WORK. The float pond improvements will be installed at the west end of the JNU airport float plane pond, 1873 Shell Simmons Drive, Juneau, Alaska. All work is located within the Airport’s Area of Operations. Close coordination with Owner is required throughout the Work.

BIDDING, CONTRACT, or TECHNICAL QUESTIONS. All communications relative to this Work, prior to opening Bids, shall be directed to the following:

Greg Smith, Contract Administrator
CBJ Engineering Department, 3rd Floor, Marine View Center
greg.smith@juneau.org
Telephone: (907) 586-0873
Fax: (907) 586-4530

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DBE GOAL. The Disadvantaged Business Enterprise goal for this project is 7.08%.

BID SECURITY. Each Bid shall be accompanied by a certified or cashier's check or Bid Bond, in the amount of 5% percent of the Bid, payable to the City and Borough of Juneau, Alaska, as a guarantee that the Bidder, if its Bid is accepted, will promptly execute the Agreement. A Bid shall not be considered unless one of the forms of Bidder's security is enclosed with it.

CONTRACTOR'S LICENSE. All contractors are required to have a current Alaska Contractor's License, prior to submitting a Bid, and a current Alaska Business License prior to award. Since this Project has federal funding, however, the Contractor and all Subcontractors will be required to have a current Alaska Contractor's License and a current Alaska Business License prior to Notice of Intent to Award.

BID TO REMAIN OPEN. The Bidder shall guarantee the Bid for a period of 120 Days from the date of Bid opening. Any component of the Bid may be awarded anytime during the 120 Days.

OWNER'S RIGHTS RESERVED. The Owner reserves the right to reject any or all Bids, to waive any informality in a Bid, and to make award to the lowest responsive, responsible Bidder as it may best serve the interests of the Owner.

OWNER: City and Borough of Juneau

By  _____
Greg Smith, Contract Administrator

Date 8/27/18

END OF SECTION

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

1.0 DEFINITIONS. Terms used in these Instructions to Bidders and the Notice Inviting Bids have the meanings assigned to them in the General Conditions, 00 7000. The term "Bidder" means one who submits a bid directly to the Owner, as distinct from a sub-bidder, who submits a bid to a Bidder.

2.0 INTERPRETATIONS AND ADDENDA.

A. **INTERPRETATIONS.** All questions about the meaning or intent of the Contract Documents are to be directed to the Engineering Contracts Administrator. Interpretations or clarifications considered necessary by the Engineering Contracts Administrator in response to such questions will be issued by Addendum, mailed, faxed, or delivered to all parties recorded by the Engineering Contracts Administrator, or Owner, as having received the contract documents. Questions received less than seven days prior to the deadline for bids may not be answered. Only questions answered by formal written Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect.

B. **ADDENDA.** Addenda may be issued to modify the Contract Documents as deemed advisable by the Owner. Addenda may be faxed or, if addendum format warrants, addenda may be posted to the CBJ Engineering Department website. In any event, notification of addendum issuance will be faxed to plan holders. Hard copies are available upon request. The Owner will make all reasonable attempts to ensure that all plan holders receive notification of Addenda, however, it is strongly recommended by the Owner that Bidders independently confirm the contents, number, and dates of each Addendum prior to submitting a bid.

3.0 FAIR COMPETITION. More than one bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. If the Owner believes that any Bidder is interested in more than one bid for the Work contemplated, all Bids in which such Bidder is interested will be rejected. If the Owner believes that collusion exists among the Bidders, all bids will be rejected.

4.0 RESPONSIBILITY OF BIDDERS. Only responsive bids from responsible Bidders will be considered. A bid submitted by a Bidder determined to be not responsible may be rejected. The Owner may find a bidder to be not responsible for any one of the following reasons, but is not limited in its responsibility analysis to the following factors:

- A. Failure to submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening, as described in 00 4310.
- B. Evidence of bid rigging or collusion;
- C. Fraud or dishonesty in the performance of previous contracts;
- D. Record of integrity;
- E. More than one bid for the same work from an individual, firm, or corporation under the same or different name;
- F. Unsatisfactory performance on previous or current contracts;
- G. Failure to pay, or satisfactorily settle, all bills due for labor and material on previous contracts;

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

- H. Uncompleted work that, in the judgment of the Owner, might hinder or prevent the bidder's prompt completion of additional work, if awarded;
- I. Failure to reimburse the Owner for monies owed on any previous contracts;
- J. Default under previous contracts;
- K. Failure to comply with any qualification requirements of the Owner; special standards for responsibility, if applicable, will be specified. These special standards establish minimum standards or experience required for a responsible Bidder on a specific contract;
- L. Engaging in any activity that constitutes a cause for debarment or suspension under the CBJ Procurement Code 53.50 or submitting a bid during a period of debarment;
- M. Lack of skill, ability, financial resources, or equipment required to perform the contract;
- N. Lack of legal capacity to contract.
- O. Bidders must be registered as required by law and in good standing for all amounts owed to the Owner per Paragraph 19.0 of this Section.
- P. Failure to submit a complete Subcontractor Report as required in section 005100 – Subcontractor Report.

Nothing contained in this section deprives the Owner of its discretion in determining the lowest responsible Bidder. Before a bid is considered for award, a Bidder may be requested to submit information documenting its ability and competency to perform the Work, according to general standards of responsibility and any special standards that may apply. It is Bidder's responsibility to submit sufficient, relevant, and adequate information. Owner will make its determination of responsibility and has no obligation to request clarification or supplementary information.

5.0 NON-RESPONSIVE BIDS. Only responsive bids will be considered. Bids may be considered non-responsive and may be rejected. Some of the reasons a bid may be rejected for being non-responsive are:

- A. If a bid is received by the CBJ Purchasing Division after the deadline for bids.
- B. If the bid is on a form other than that furnished by the Owner, or legible copies thereof; or if the form is altered or any part thereof is detached; or if the bid is improperly signed.
- C. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the bid incomplete, indefinite, ambiguous as to its meaning, or in conflict with the Owner's bid document.
- D. If the Bidder adds any unauthorized conditions, limitations, or provisions reserving the right to accept or reject any award, or to enter into a contract pursuant to an award. This does not exclude a bid limiting the maximum gross amount of awards acceptable to any one Bidder at any one bid opening, provided that any selection of awards will be made by the Owner.

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- E. If the bid does not contain a Unit Price for each Unit Price pay item listed, except in the case of authorized alternate pay items.
- F. If the Bidder has not acknowledged receipt of each Addendum.
- G. If the Bidder fails to furnish an acceptable bid guaranty with the bid.
- H. If any of the Unit Prices bid are excessively unbalanced (either above or below the amount of a reasonable bid) to the potential detriment of the Owner.
- I. If a Bid Modification does not conform to Paragraph 13.0 of this section.
- J. If all Bidding Forms are not submitted at time of Bid.

6.0 **BIDDER'S EXAMINATION OF CONTRACT DOCUMENTS AND SITE.** It is the responsibility of each Bidder before submitting a bid:

- A. To examine thoroughly the Contract Documents and other related data identified in the bidding documents. This includes, but is not limited to :
 - 1. Visiting the site to become familiar with and to satisfy the Bidder as to the local and specific conditions that may affect cost, progress, or performance of the Work,
 - 2. Considering federal, state and local laws and regulations that may affect cost, progress, or performance of the Work,
 - 3. Studying and carefully correlating the Bidder's observations with the Contract Documents, and other related data; and
 - 4. Notifying the Owner of all conflicts, errors, or discrepancies in or between the Contract Documents and such other related data.
- B. To make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data that pertain to the physical conditions (surface, subsurface, and underground utilities) at or contiguous to the site or otherwise that may affect cost, progress, or performance of the Work and that the bidder deems necessary to determine its Bid for performing the Work in accordance with the time, price, and other terms and conditions of the contract documents.
- C. To request access to the project site for purposes of obtaining additional information as described above at least ten days in advance of the advertised deadline for bids. The Owner will provide access and security escort to the Bidder, who shall pay for all costs associated with such escort. The Bidder's investigations shall be limited to actions that do not require permits or authorizations from the Federal Aviation Administration or similar agencies.

The submission of a bid shall be prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the Work and as to the requirements of the contract documents. The submission of a bid will constitute an incontrovertible representation by the Bidder that the Bidder has complied with every requirement of this section, "Bidder's Examination of Contract Documents and Site" herein, that without exception the Bid is premised upon performing the Work required by the Contract Documents and such means, **methods, techniques, sequences, or procedures of construction as may be indicated in or required** by the Contract Documents, and that the Contract Documents are sufficient in scope and

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

detail to indicate and convey understanding of all terms and conditions for performance of the Work.

7.0 BIDDING FORMS

- A. The Bid (00 4113), Bid Schedule (00 4114), Bid Security (00 4313), and other documents required at the time of bid submission shall be made on forms provided in the yellow bidding packet, or on legible and complete copies thereof. The specific forms and documents required for bidding this project are described in the bidding checklist (00 4100), and included in Bid Form (00 4113).
- B. All blanks on the Bid (00 4113), Bid Schedule (00 4114), Bid Security (00 4313), and other documents required at the time of bid submission must be signed in ink with all names legibly printed or typed below the signature.
- C. Bids by corporations must be executed in the corporate name by the president, a vice-president (or other corporate officer). The corporate address and state of incorporation must appear below the signature.
- D. Bids by partnerships must be executed in the partnership name and be signed by a managing partner, and the official address of the partnership must appear below the signature.
- E. The bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the bid form. Failure to acknowledge Addenda may render bid non-responsive and may cause its rejection.
- F. The address to which communications regarding the bid are to be directed must be shown.

8.0 SUBSTITUTE OR "OR-EQUAL" ITEMS. Requests for substitution or consideration of "or equal" items is not allowed during the bid period. The procedure for the submittal of substitute or "or-equal" products during execution of the Work is specified in Section 01 2500.

9.0 SUBMISSION OF BIDS. The bid shall be delivered by the time and to the place stipulated in Section 00 0300 - Notice Inviting Bids. It is the Bidder's sole responsibility to see that its bid is received in proper time. Oral, telegraphic, emailed, or faxed bids will not be considered. The envelope enclosing the sealed bids shall be plainly marked in the upper left-hand corner with the name and address of the Bidder and shall also include the label included in Section 00 0300 – Notice Inviting Bids. The bid security shall be enclosed in the same envelope with the bid.

10.0 BID SECURITY, BONDS, AND INSURANCE. Each bid shall be accompanied by a certified, or cashier's check, or approved Bid Bond (00 4313) in an amount of at least 5 percent of the total bid price. The "total bid price" is the amount of the Base Bid, plus the amount of alternate bid items, if any, that total maximum amount for which the contract could be awarded. Said check or bond shall be made payable to the Owner and shall be given as a guarantee that the Bidder, if offered the Work, will enter into an Agreement with the Owner, and will furnish the necessary insurance certificates, Payment Bond, and Performance Bond; each of said bonds, if required, and insurance amounts shall be as stated in the Supplementary General Conditions. In case of refusal or failure to enter into said Agreement, the check or Bid Bond, as the case may be, may be forfeited to the Owner. If the Bidder elects to furnish a Bid Bond as its bid security, the Bidder shall use the

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Bid Bond form bound herein, or one conforming substantially to it in form. Bid Bonds must be accompanied by a legible Power of Attorney.

11.0 RETURN OF BID SECURITY. The Owner will return all bid security checks (certified or cashier's) accompanying such of the Bids as are not considered in making the award. All other Bid securities will be held until the Agreement has been executed. Following execution of the Agreement, all other bid security checks will be returned to the respective Bidders whose bids they accompanied and bid security bonds will be appropriately discarded.

12.0 DISCREPANCIES IN BIDS. In the event there is more than one pay item in a Bid Schedule, the Bidder shall furnish a price for all pay items in the schedule, and failure to do so may render the bid non-responsive and cause its rejection. In the event there are Unit Price pay items in a Bid Schedule and the amount indicated for a Unit Price pay item does not equal the product of the Unit Price and quantity, the Unit Price shall govern and the amount will be corrected accordingly, and the Bidder shall be bound by said correction. In the event there is more than one pay item in a Bid Schedule and the total indicated for the schedule does not agree with the sum of the prices bid on the individual items, the prices bid on the individual items shall govern and the total for the schedule will be corrected accordingly, and the Bidder shall be bound by said correction.

13.0 BID MODIFICATIONS AND UNAUTHORIZED ALTERNATIVE BIDS.

- A. Any bidder may deliver a modification to a bid in person, by mail or fax (907-586-4561), provided that such modification is received by the Purchasing Division no later than the deadline for bids. Modifications will be time and date stamped by the Purchasing Division, which will establish the official time of receipt of the modification. The modification must not reveal the bid price but should be in the form of an addition or subtraction or other modification so that the final prices will not be known until the sealed bid is opened.

The Bid modifications shall be provided on the **Bid Modification Form (00 4115)** located at the end of this section. Submittal of any other form by the vendor may deem the modification unacceptable by the Owner. **A mail or fax modification should not reveal the bid price but should provide the addition or subtraction or other modification so that the final prices will not be known by the City and Borough until the sealed bid is opened.** Submitted Modification forms shall include the modification to the unit price or lump sum amount of each pay item modified.

FAX DISCLAIMER: It is the responsibility of the bidder to submit modifications in a timely manner. Bidders' use of a fax machine to modify their bid shall be at bidders' sole risk. The Purchasing Division will attempt to keep the fax machine in good working order but will not be responsible for bid modifications that are late due to mechanical failure, a busy fax machine, or any other cause arising from bidder's use of a fax machine, even if bidder submits a transmission report or provides other confirmation indicating that the bidder transmitted a bid modification prior to the deadline. The City will not be responsible for its failure to receive the modification whether such failure is caused by equipment or human error, or otherwise. Bidders are therefore strongly encouraged to confirm receipt of their bid modification with the Purchasing Division (907-586-5258) prior to deadline.

- B. Conditioned bids, limitations, or provisos attached to the Bid or bid modification will render it unauthorized and cause its rejection as being non-responsive. The completed Bid forms shall be without interlineations, alterations, or erasures in the printed text. All

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

changes shall be initialed by the person signing the Bid. Alternative Bids will not be considered unless called for.

14.0 WITHDRAWAL OF BID. Prior to the deadline for bids, the bid may be withdrawn by the Bidder by means of a written request, signed by the Bidder or its properly authorized representative. Such written request must be delivered to the place stipulated in the Notice Inviting Bids for receipt of bids.

15.0 AWARD OF CONTRACT.

- A. Award of a contract, if it is awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Technical Specifications and will be made to the lowest responsive, responsible Bidder whose Bid complies with all the requirements prescribed. Unless otherwise specified, any such award will be made within the period stated in the Notice Inviting Bids that the Bids are to remain open. Unless otherwise indicated, a single award will be made for all the Bid items in an individual Bid Schedule.
- B. If the OWNER has elected to advertise this Project with a Base Bid and Alternates, the OWNER may elect to award the contract for the Base Bid, or the Base Bid in combination with one or more Alternates selected by the OWNER. In either case, award shall be made to the responsive, responsible bidder offering the lowest total Bid for the WORK to be awarded.
- C. Low Bidder will be determined on the basis of the lowest total of the Base Bid plus combinations of Alternates in order of priority as listed below within the limits of available funding.

Priority No.

- 1. Base Bid with Additive Alternate No. 1 and Additive Alternate No. 2
- 2. Base Bid with Additive Alternate No. 1
- 3. Base Bid

16.0 EXECUTION OF AGREEMENT.

- A. All bids of value greater than \$1,000,000 must be approved by the CBJ Assembly. After the CBJ Assembly has approved the award and after the bid protest period, the Owner will issue a Notice of Intent to Award to the approved Bidder. The Bidder to whom award is made shall execute a written Agreement with the Owner on the Agreement form supplied in these contract documents, collect insurance, and shall furnish all certificates and bonds required by the Contract Documents within 10 calendar days from the date of the Notice of Intent to Award letter.
- B. Failure or refusal to enter into the Agreement as herein provided or to conform to any of the stipulated requirements in connection therewith shall be just cause for annulment of the award and forfeiture of the bid security. If the lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the Owner may award the contract to the second lowest responsive, responsible Bidder. If the second lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the Owner may award the contract to the third lowest responsive, responsible Bidder. On the failure or refusal of such second or third lowest

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

Bidder to execute the Agreement, each such Bidder's Bid securities shall be likewise forfeited to the Owner.

17.0 LIQUIDATED DAMAGES. Provisions for liquidated damages, if any, are set forth in the Agreement.

18.0 FILING A PROTEST.

- A. A Bidder may protest the proposed award of a competitive sealed bid by the City and Borough of Juneau. The protest shall be executed in accordance with CBJ Ordinance 53.50.062 PROTESTS and CBJ Ordinance 53.50.080 ADMINISTRATION OF PROTEST. The entire text of the CBJ Purchasing Ordinance can be accessed at the CBJ website, <http://www.juneau.org/law/code/code.php>, or call the CBJ Purchasing Division at (907) 586-5258 for a copy of the ordinance.
- B. Late protests shall not be considered by the CBJ Purchasing Officer.

19.0 CONTRACTOR'S GOOD STANDING WITH CBJ FINANCE DEPARTMENT: Contractors must be in good standing with the CBJ prior to award, and prior to any contract renewals, and in any event no later than *seven business days* following notification by the CBJ of intent to award. **Good standing** means: all amounts owed to the CBJ are current and the Contractor is not delinquent with respect to any taxes, fees, assessment, or other monies due and owed the CBJ, or a Confession of Judgment has been executed and the Contractor is in compliance with the terms of any stipulation associated with the Confession of Judgment, including being current as to any installment payments due; and Contractor is current in all CBJ reporting obligations (such as sales tax registration and reporting and business personal property declarations). Failure to meet these requirements may be cause for rejection of your bid. To determine if your business is in good standing, or for further information, contact the CBJ Finance Department's Sales Tax Division at (907) 586-5265 for sales tax issues, Assessor's Office at (907)586-0930 for business personal property issues, or Collections Division at (907) 586-5268 for all other accounts.

20.0 FEDERAL CONTRACT PROVISIONS. Bidders shall comply with all applicable federal procurement and contract provisions including requirements in the Supplementary General Conditions and the following:

- A. **BUY AMERICAN PREFERENCES.** The contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder must complete and submit the Buy American certification included in Section 00 4410 with its bid. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance. Additionally, if the apparent low bidder requests a Type 3 Waiver to Buy American Compliance, the applicable documentation must be received in accordance with Section 00 4410. Failure to submit such completed information will result in rejection as a nonresponsive bid.

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

- B. CIVIL RIGHTS, TITLE VI NOTICE.** The Juneau International Airport of the City and Borough of Juneau, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.
- C. DISADVANTAGED BUSINESS ENTERPRISES (DBE).** The Owner's award of this contract is conditioned upon Bidder satisfying the good faith effort requirements of 49 CFR §26.53. As a condition of bid responsiveness, the Bidder must submit the following information on the forms provided in Section 00 5420:
1. The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
 2. A description of the work that each DBE firm will perform;
 3. The dollar amount of the participation of each DBE firm listed under (1.)
 4. Written statement from Bidder that attests their commitment to use the DBE firm(s) listed under (1.) to meet the Owner's project goal;
 5. If Bidder cannot meet the advertised project DBE goal; evidence of good faith efforts undertaken by the Bidder as described in Section 00 5420 and 49 CFR Part 26.

The successful Bidder must provide written confirmation of participation from each of the DBE firms the Bidder lists in their commitment. This Bidder must submit the DBE's written confirmation of participation (Section 00 5420).

- D. TRADE RESTRICTION CERTIFICATION.** By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror -
- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);
 - b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R.; and
 - c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

subcontractor:

- (1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or
- (2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or
- (3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings. The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

E. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION to ENSURE EQUAL EMPLOYMENT OPPORTUNITY.

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade: 15.1%

Goals for female participation in each trade: 6.9%

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As used in this notice and in the contract resulting from this solicitation, the "covered area" is the state of Alaska.

F. DEBARMENT.

CERTIFICATION OF BIDDER REGARDING DEBARMENT. By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

The successful bidder, by administering each lower tier subcontract that exceeds \$25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: <http://www.sam.gov>.
2. Collecting a certification statement similar to the Certification of Offerer /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

G. CERTIFICATION REGARDING LOBBYING. The bidder certifies by signing and submitting this bid, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

- (3) The Contractor shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

END OF SECTION 00 2113

SECTION 00 4113 - BID

BID TO: THE CITY AND BOROUGH OF JUNEAU

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the Owner in the form included in the Contract Documents (as defined in Article 7 of Section 00 5200 - Agreement) to perform the Work as specified or indicated in said Contract Documents entitled

**JNU Float Pond Improvements
Contract No. BE18-053**

2. Bidder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the "Notice Inviting Bids" and "Instructions to Bidders," dealing with the disposition of the Bid Security.
3. This Bid will remain open for the period of time stated in the "Notice Inviting Bids" unless otherwise required by law. Bidder will enter into an Agreement within the time and in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders," and will furnish insurance certificates, Payment Bond, Performance Bond, and any other documents as may be required by the Contract Documents.
4. Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as Bidder deems necessary.
5. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.
6. To all the foregoing, and including all Bid Schedule and information required of Bidder contained in this Bid Form, said Bidder further agrees to complete the Work required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefore the Contract Price based on the total bid price(s) named in the aforementioned Bid Schedule.
7. Bidder has examined copies of all the Contract Documents including the following Addenda (receipt of all of which is hereby acknowledged by the Undersigned):

Addenda No.	Date Issued	Addenda No.	Date Issued

Give number and date of each addenda above. Failure to acknowledge receipt of all Addenda may cause the Bid to be non-responsive and may cause its rejection.

SECTION 00 4113 - BID

8. TO BE CONSIDERED, ALL BIDDERS MUST COMPLETE AND INCLUDE THE FOLLOWING AT THE TIME OF THE DEADLINE FOR BIDS. MISSING DOCUMENTS WILL DEEM THIS BID NON-RESPONSIVE:

- Bid, Section 00 4113 (includes addenda receipt statement)
- Completed Bid Schedule, Section 00 4114
- Bid Security (Bid Bond, Section 00 4313, or by a certified or cashier's check as stipulated in the Notice Inviting Bids, Section 00 0300)
- Contractor's Financial Responsibility (00 4310)
- Complete DBE Bidder's Registration Form for Contractor (00 5420 – pg. 3)
- Buy American Certificate (00 4410)
- Review applicable federal regulations, (49CFR Part 26).

9. The Bidder has read this Bid and agrees to the conditions as stated herein by signing his/her signature in the space provided below.

10. The apparent low Bidder is required to complete and submit the following documents by 4:30 p.m. on the ***fifth business day*** following the date of the Posting Notice.

Dated: _____	Bidder: _____ (Company Name)
Alaska Contractor's Business License No: _____	By: _____ (Signature)
Alaska Contractor's License No: _____	Printed Name: _____
Telephone No: _____	Title: _____
Fax No: _____	Address: _____ (Street or P.O. Box)
Email: _____	(City, State, Zip)

- Subcontractor Report (00 5100);
- Complete DBE Bidder's Registration Form for Subcontractors and others, Section 00 5420 – pg. 3
- Complete Utilization Report for each DBE, Section 00 5420, if DBE goals are not achieved, the Contact Reports and Summary of Good Faith Efforts are required (forms in Section 00 5420);
- Completed documentation for Type 3 Waiver to Buy American requirements, if a waiver is being requested by the Contractor (00 4410).

The apparent low Bidder who fails to submit a completed Subcontractor Report (00 5100) or complete documentation for Buy American Type 3 Waiver (00 4410) within the time specified above will be found to be not a responsible Bidder and may be required to forfeit the Bid security. The Owner will then consider the next lowest Bidder for award of the contract.

SECTION 00 4113 - BID

11. The successful Bidder will be required to submit, within *Ten Days (calendar)* after the date of the “Notice of Intent to Award” letter, the following executed documents:

- Agreement Forms, Section 00 5200
- Performance Bond, Section 00 5300
- Payment Bond, Section 00 5400
- Certificates of Insurance, (Contractor) Section 00 7000 and Section 00 8000
- Vets4212 Federal Contractor Report, Section 005430
- EEO - 1 Certification, Section 00 5500
- EEO Estimated Employment Profile, Section 00 5500
- EEO Notice to Labor Unions, Minority/Women Organizations, Section 00 5500
- EEO Signature Page, Section 00 5500

END OF SECTION 00 4113

SECTION 004114 BID SCHEDULE

JNU FLOAT POND IMPROVEMENTS – BASE BID

Pay Item No.	Pay Item Description	Pay Unit	Approximate Quantity	Unit Price		Amount	
				Dollars	Cents	Dollars	Cents
D-701a	36-inch Valve Assembly with Actuator	LS	All Req'd	LUMP	SUM	\$	
D-701d	36-inch HDPE Buried Pipe and Vault Connections	LS	All Req'd	LUMP	SUM	\$	
D-701e	Remove 48-inch CMP Pipe	LS	All Req'd	LUMP	SUM	\$	
D-701g	Lower Float Pond Water Level	LS	All Req'd	LUMP	SUM	\$	
D-710a	Excavation Dewatering and Stabilization	LS	All Req'd	LUMP	SUM	\$	
D-711a	Slip-line 36-inch HDPE	LF	97			\$	
D-712a	Annular Space Grout	CY	25			\$	
D-751a	Concrete Vault for Valve Assembly	LS	All Req'd	LUMP	SUM	\$	
F-162a	Chain Link Fence	LF	90			\$	
F-162b	Temporary Fencing and Barricades	LS	All Req'd	LUMP	SUM	\$	
F-162c	Remove Chain Link Fence	LF	90			\$	
G-105a	Mobilization/Demobilization	LS	All Req'd	LUMP	SUM	\$	
G-135a	Construction Surveying by the Contractor	LS	All Req'd	LUMP	SUM	\$	
G-300a	CPM Scheduling	LS	All Req'd	LUMP	SUM	\$	
G-700a	Airport Flagger	CS	All Req'd	CONT	SUM	\$5,000	00
L-100a	Electrical	LS	All Req'd	LUMP	SUM	\$	
P-101a	Pavement Removal	SY	210			\$	
P-152a	Unclassified Excavation and Disposal	CY	600			\$	
P-152b	Unclassified Excavation and Reinstallation	CY	560			\$	
P-154a	Subbase Course	CY	440			\$	
P-156a	Erosion Sediment and Pollution Control Administration	LS	All Req'd	LUMP	SUM	\$	
P-156b	Temporary Erosion Sediment and Pollution Control	LS	All Req'd	LUMP	SUM	\$	
P-209a	Crushed Aggregate Base Course	CY	50			\$	
P-403a	Hot Mix Asphalt, 4"t.	SY	235			\$	
T-901a	Seeding	SY	250			\$	
T-905a	Topsoil	CY	30			\$	

TOTAL BASE BID AMOUNT IN FIGURES: \$ _____

BIDDER NAME: _____

SECTION 004114 BID SCHEDULE

JNU FLOAT POND IMPROVEMENTS – ADDITIVE ALTERNATE 1

Pay Item No.	Pay Item Description	Pay Unit	Approximate Quantity	Unit Price		Amount	
				Dollars	Cents	Dollars	Cents
D-701b.1	Flapper Gate Repairs and Lift System	LS	All Reqd	LUMP	SUM	\$	
D-701c.1	Steel Debris Screen	LS	All Reqd	LUMP	SUM	\$	
D-701f.1	Remove Debris Screen	LS	All Reqd	LUMP	SUM	\$	
P-610a.1	Flapper Gate Lift System Concrete Support Wall	LS	All Reqd	LUMP	SUM	\$	

TOTAL ADDITIVE ALTERNATE 1 AMOUNT IN FIGURES: \$ _____

BIDDER NAME: _____

JNU FLOAT POND IMPROVEMENTS – ADDITIVE ALTERNATE 2

Pay Item No.	Pay Item Description	Pay Unit	Approximate Quantity	Unit Price		Amount	
				Dollars	Cents	Dollars	Cents
L-100a.2	Trailer Mounted Generator	LS	All Reqd	LUMP	SUM	\$	

TOTAL ADDITIVE ALTERNATE 2 AMOUNT IN FIGURES: \$ _____

BIDDER NAME: _____

SECTION 00 4115 - BID MODIFICATION

BID MODIFICATION FORM

SUBMIT TO: CITY AND BOROUGH OF JUNEAU
PURCHASING DIVISION
FAX 907-586-4561

Modification Number: _____

Note: All modifications shall be made to the original bid amount(s). If more than one Modification form is submitted by any one bidder, changes from all Modification forms submitted will be combined and applied to the original bid. Changes to the modified Bid amounts will be calculated by the Owner.

PAY ITEM NO.	PAY ITEM DESCRIPTION	MODIFICATIONS TO UNIT PRICE OR LUMP SUM (indicate +/-)

Total Increase or Decrease: \$ _____

Name of Bidder

Responsible Party Signature

Printed Name (must be an authorized signatory for Bidder)

SECTION 00 4310 - CONTRACTOR'S FINANCIAL RESPONSIBILITY

All Bidders must complete this form and submit at the time of the deadline for bids. Attach additional sheets as necessary to respond to questions.

PROJECT: JNU Float Pond Improvements; Contract BE18-053.

As the General Contractor on this project, I intend to subcontract ____% of the total value of this contract.

A. EXPERIENCE

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

No Yes If YES, explain:

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

3. Have you had previous construction contracts or subcontracts with the City and Borough of Juneau?

Yes No

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

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

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. Do you propose to purchase any equipment for use on this project not listed on table B-1?

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

3. Do you propose to rent any equipment for this work not listed on table B-1?

No Yes If YES, describe type and quantity:

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

Yes No If NO, please explain:

I hereby certify that the above statements are true and complete.

Contractor Signature

Name and Title of Person Signing

Signature

Date

SECTION 00 4311 – TAX DELINQUENCY AND FELONY CONVICTIONS CERTIFICATION

CITY AND BOROUGH OF JUNEAU

**CERTIFICATION of BIDDER
REGARDING TAX DELINQUENCY and FELONY CONVICTIONS**
US DOT Federal-Aid Contracts

JNU FLOAT POND IMPROVEMENTS BE18-053

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by marking (x) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

TERM DEFINITIONS

Felony Convictions: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. §3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

CERTIFICATIONS (Please check appropriate boxes.)

- 1) The applicant represents that it is is not a corporation that has any unpaid Federal Tax Liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
- 2) The applicant represents that it is is not is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

NOTE

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government’s interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency’s SDO to facilitate completion of the required considerations before award decisions are made.

Signature of Authorized Company Representative

Title

Company Name

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

()

Date

Phone Number

SECTION 00 4313 - BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that _____
_____ as Principal, and _____
as Surety, are held and firmly bound unto **THE CITY AND BOROUGH OF JUNEAU** hereinafter called
"Owner," in the sum of _____
_____ dollars, (not less than five percent of the total amount of the Bid) for
the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators,
successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has submitted a Bid to said Owner to perform the Work required under the
Bid Schedule of the Owner's Contract Documents entitled

JNU FLOAT POND IMPROVEMENTS

Contract No. BE18-053

NOW THEREFORE, if said Principal is awarded a contract by said Owner and, within the time and in
the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders" enters into a written
Agreement on the form of Agreement bound with said Contract Documents, furnishes the required certificates
of insurance, and furnishes the required Performance Bond and Payment Bond, then this obligation shall be
null and void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by
said Owner and Owner prevails, said Surety shall pay all costs incurred by said Owner in such suit, including a
reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this _____ day of _____, 20_____.

(SEAL) _____
(Principal)

(SEAL) _____
(Surety)

By: _____
(Signature)

By: _____
(Signature)

END OF SECTION 00 4313

SECTION 00 4410 - BUY AMERICAN CERTIFICATION

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR TOTAL FACILITY

As a matter of bid responsiveness, the bidder must complete, sign, date, and submit this certification statement with their proposal. The bidder must indicate how they intend to comply with 49 USC § 50101 by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e. not both) by inserting a checkmark (✓) or the letter "X".

- Bidder hereby certifies that it will comply with 49 USC. 50101 by:
- a) Only installing steel and manufactured products produced in the United States; or
 - b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
 - c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic products.
3. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

- The bidder hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder with the apparent low bid agrees:

1. To submit to the Owner within 5 business days of the bid posting, a formal waiver request and all required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the bid.
3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To furnish US domestic product for any waiver request that the FAA rejects.
5. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

REQUIRED DOCUMENTATION

Type 3 Waiver - The cost of components and subcomponents produced in the United States is more than 60% of the cost of all components and subcomponents of the "facility". The required documentation for a type 3 waiver is:

- a) Listing of all manufactured products that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety)

SECTION 00 4410 - BUY AMERICAN CERTIFICATION

- b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
- c) Percentage of non-domestic component and subcomponent cost as compared to total “facility” component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.
- d) FAA Final Assembly Questionnaire form (page 3 of this section).

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

- a) Detailed cost information for total project using US domestic product
- b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date

Signature

Company Name

Title

SECTION 00 4410 - BUY AMERICAN CERTIFICATION

Buy American Preferences - Final Assembly Questionnaire

To assist the Federal Aviation Administration (FAA) in making the determination of whether final assembly of the product occurs in the United States, please complete and submit this questionnaire when requesting a Buy American Waiver under 49 U.S.C. 50101(b)(3)(A).

1. Please provide a description of the assembly process occurring at the specified final location in the United States?

Please describe the final assembly process and its various operations?

How long does the final assembly process take to complete?

2. Please provide a description of the resources used to conduct the assembly of the product at the specified location in the United States?

How many employees are involved in the final assembly process and what is the general skill level of those employees?

What type of equipment is used during the final assembly process?

What is a rough estimate of the associated cost to conduct final assembly of the product at the specified location in the United States?

SECTION 00 5100 - SUBCONTRACTOR REPORT

LIST OF SUBCONTRACTORS (AS 36.30.115)

The apparent low Bidder must submit a list of Subcontractors that the Bidder proposes to use in the performance of this contract *on the fifth business day* following the Posting Notice of Bids. If the fifth day falls on a weekend or holiday, the report is due by close of business on the next business Day following the weekend or holiday. The Subcontractor Report list must include each Subcontractor's name, address, location, evidence of valid Alaska Business License, and valid Alaska Contractor's Registration under AS 08.18. *If no Subcontractors are to be utilized in the performance of the Work, write in ink or type "NONE" on line (1) below*

<u>SUBCONTRACTOR</u>	¹ AK Contractor License No.	¹ Contact Name	Type of	Contract	✓ if
<u>ADDRESS</u>	² AK Business License No.	² Phone No.	<u>Work</u>	<u>Amount</u>	<u>DBE</u>
1. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
2. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
3. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
4. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>

I certify that the above listed Alaska Business License(s) and Contractor Registration(s), if applicable, were valid at the time Bids were opened for this Project.

Contractor, Authorized Signature

Contractor, Printed Name

Company

SECTION 005100 - SUBCONTRACTOR REPORT

- A. A Bidder may replace a listed Subcontractor if the Subcontractor:
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 Owner;
 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 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 Owner not to be responsible.
 10. is not in "Good Standing" with the Owner as required in Article 21.0 in Section 00100 – Instructions to Bidders.
- B. If a Bidder fails to list a Subcontractor or lists more than one Subcontractor for the same portion of Work, the Bidder shall be considered to have agreed to perform that portion of Work without the use of a Subcontractor and to have represented the Bidder to be qualified to perform that Work.
- C. 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.
- D. If a contract is awarded to a Bidder who violates this section, the Owner may:
1. cancel the contract; 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.
- E. On the Subcontractor Report, the apparent low Bidder must list any Subcontractors anticipated to perform Work with a value of greater than one-half of one percent of the intended award amount, or \$2,000, whichever is less.
- F. An apparent low Bidder who fails to submit a completed Subcontractor Report within the time specified in this section may be found to be not a responsible Bidder and may be required to forfeit the Bid security. The Owner will then consider the next lowest Bidder for award of the contract.

END OF SECTION 00 5100

SECTION 00 5200 - AGREEMENT

THIS AGREEMENT is between THE CITY AND BOROUGH OF JUNEAU (hereinafter called Owner) and _____ (hereinafter called Contractor) Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK.

Contractor shall complete the Work as specified or as indicated under the Bid Schedule of the Owner's Contract Documents **Contract BE18-053, named JNU Float Pond Improvements**

The Work is generally described as follows: The WORK generally consists of major improvements to the float plane pond outlet pipe and valve control including the following: removal and replacement of existing asphalt; removal and disposal of existing CMP culvert and debris grate, removal and replacement of chain-link fencing; temporary fencing and flagging controls; construction surveying; excavation, dewatering, backfill and stabilization; temporary lowering of the float pond water level; new debris grate; slip lining and grouting an existing culvert; HDPE pipe; cast in place concrete valve vault; shut-off valve with electrical actuator and controls; flapper gate lift system; topsoil and hydro seeding; erosion and sediment controls; and other miscellaneous related improvements.

The Work to be paid under this contract shall include the following: Total Bid as shown in Section 00 4114 - Bid Schedule.

ARTICLE 2. CONTRACT COMPLETION TIME.

Substantial completion must be achieved on or before April 1, 2019 to coincide with the re-opening of the float pond. All work associated with the installation of the 36-inch HDPE pipe, the concrete vault, the shut-off valve/actuator, the electrical control panel, the modifications to the existing flapper gate and lift system, the removal of all temporary fencing and the repair of the Emergency Vehicle Access Road (EVAR) must be complete at that time. **Final Completion must be achieved on or before May 31, 2019.** All work associated with the asphalt pavement patching within the seaplane base access road must be complete by that time.

ARTICLE 3. DATE OF AGREEMENT

The date of this agreement will be the date of the last signature on page three of this section.

ARTICLE 4. LIQUIDATED DAMAGES.

Owner and the Contractor recognize that time is of the essence of this Agreement and that the Owner will suffer financial loss if the Work is not completed within the time specified in Article 2 herein, plus any extensions thereof allowed in accordance with Article 8 of the General Conditions. They also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual damages suffered by the Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Owner and the Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall pay the Owner **\$1,250** for each Day that expires after the completion time(s) specified in Article 2 herein. The amount of liquidated damages specified above is agreed to be a reasonable estimate based on all facts known as of the date of this Agreement.

ARTICLE 5. CONTRACT PRICE.

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents in current funds the amount set forth in the Bid Schedule. The Contractor agrees to accept as full and complete payment for all Work to be done in this contract for: **CBJ Contract BE18-053, named JNU Float Pond Improvements**, those Lump Sum amounts as set forth in the Bid Schedule in the Contract Documents for this Project.

SECTION 00 5200 - AGREEMENT

The total amount of this contract shall be _____ (\$ _____), except as adjusted in accordance with the provisions of the Contract Documents.

ARTICLE 6. PAYMENT PROCEDURES.

Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by the Architect as provided in the General Conditions.

Progress payments will be paid in full in accordance with Article 9 of the General Conditions until ninety (90) percent of the Contract Price has been paid. The remaining ten (10) percent of the Contract Price may be retained, in accordance with applicable Alaska State Statutes, until final inspection, completion, and acceptance of the Project by the Owner.

ARTICLE 7. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire Agreement between Owner and Contractor concerning the Work consist of this Agreement (pages 00 5200-1 to 00 5200-6, inclusive) and the following sections of the Contract Documents:

- Table of Contents (pages 00 0005-1 to 00 0005-2, inclusive).
- Notice Inviting Bids (pages 00 0300-1 to 00 0300-3, inclusive).
- Instructions to Bidders (pages 00 2113-1 to 00 2113-11, inclusive).
- Bid (pages 00 4113-1 to 00 4113-3, inclusive).
- Bid Schedule (pages 00 4114-1, inclusive).
- Bid Modification (pages 00 4115-1, inclusive).
- Contractor's Financial Responsibility (pages 00 4310-1 to 00 4310-2, inclusive).
- Bid Bond (page 00 4313-1, inclusive) or Bid Security.
- Buy American (pages 00 4401-1 to 00 4401-3, inclusive).
- Subcontractor Report (pages 00 5100-1 to 00 5100-2, inclusive).
- Insurance Certificate(s).
- Performance Bond (pages 00 5300-1 to 00 5300-2, inclusive).
- Payment Bond (pages 00 5400-1 to 00 5400-2, inclusive).
- Veteran's Participation – Vets 4212 Form (pages 00 5430-1 to 00 5430-5, inclusive).
- DBE Documents (Sections 00 5420-1 to 00 5420-8, inclusive).
- Federal EEO Bid Conditions (pages 00 5500-1 to 00 5500-11, inclusive).
- Federal Labor Standards, Reporting, and Prevailing Wage Rate Determination (page 00 5600-1, inclusive).
- Employment Security Tax Clearance Form (page 00 6100-1, inclusive).
- Compliance Certificate and Release Form (pages 00 6200-1, inclusive).
- General Conditions (pages 00 7000-1 to 00 7000-46, inclusive).
- Supplementary General Conditions (pages 00 8000-1 to 00 8000-14, inclusive).
- Technical Specifications as listed in the Table of Contents.
- Drawings consisting of 15 sheets, as listed in the Table of Contents.
- Addenda numbers _____ to _____, inclusive.
- Change Orders which may be delivered or issued after the Date of the Agreement and which are not attached hereto.

There are no Contract Documents other than those listed in this Article 7. The Contract Documents may only be amended by Change Order as provided in Paragraph 3.3 of the General Conditions.

SECTION 00 5200 - AGREEMENT

ARTICLE 8. MISCELLANEOUS.

Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

Owner and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents. This Agreement shall be governed by the laws of the State of Alaska. Jurisdiction shall be in the State of Alaska, First Judicial District.

IN WITNESS WHEREOF, Owner and Contractor have caused this Agreement to be executed on the date listed below signed by Owner.

OWNER:

CONTRACTOR:

City and Borough of Juneau

(Company Name)

(Signature)

(Signature)

By: Duncan Rorie Watt, City & Borough Manager
(Printed Name)

By: _____
(Printed Name, Authority or Title)

Date: _____

Date: _____
(Contractor Signature Date)

Owner's address for giving notices:

Contractor's address for giving notices:

155 South Seward Street

Juneau, Alaska 99801

907-586-0873 907-586-4530
(Telephone) (Fax)

(Telephone) (Fax)

(E-mail address)

Contractor License No. _____

SECTION 00 5200 - AGREEMENT

CERTIFICATE

(if Corporation)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the
_____ a corporation existing under the laws of
the State of _____, held on _____, 20____, the following resolution
was duly passed and adopted:

“RESOLVED, that _____, as _____ President
of the Corporation, be and is hereby authorized to execute the Agreement with the CITY AND
BOROUGH OF JUNEAU and this corporation and that the execution thereof, attested by the
Secretary of the Corporation, and with the Corporate Seal affixed, shall be the official act and deed
of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the
corporation this _____ day of _____, 20_____.

Secretary

(SEAL)

SECTION 00 5200 - AGREEMENT

CERTIFICATE
(if Partnership)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the _____ a partnership existing under the laws of the State of _____, held on _____, 20____, the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ of the Partnership, be and is hereby authorized to **execute the Agreement** with the CITY AND BOROUGH OF JUNEAU and this partnership and that the execution thereof, attested by the _____ shall be the official act and deed of this Partnership."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of _____, 20_____.

Secretary

(SEAL)

SECTION 00 5200 - AGREEMENT

**CERTIFICATE
(if Joint Venture)**

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the
_____ a joint venture existing under the laws of the
State of _____, held on _____, 20____, the following resolution was duly passed and
adopted:

"RESOLVED, that _____, as _____ of the
Joint Venture, be and is hereby authorized to **execute the Agreement** with the CITY AND
BOROUGH OF JUNEAU and this joint venture and that the execution thereof, attested by the
_____ shall be the official act and deed of this Joint Venture."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of
_____, 20____.

Secretary

(SEAL)

END OF SECTION 00 5200

SECTION 00 5300 - PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: That we _____
(Name of Contractor)

a _____
(Corporation, Partnership, Individual)

hereinafter called "Principal" and _____
(Surety)

of _____, State of _____ hereinafter called the "Surety", are held and firmly bound to the CITY AND BOROUGH of JUNEAU, ALASKA hereinafter called "Owner", for the penal sum
(Owner) (City and State)

of _____ dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Contractor has entered into a certain contract with the Owner, the effective date of which is (CBJ Contracts Office to fill in effective date) _____, a copy of which is hereto attached and made a part hereof for the construction of:

**JNU Float Pond Improvements
Contract BE18-053**

NOW, THEREFORE, if the Principal shall truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof, which may be granted by the Owner, with or without notice to the Surety, and if it shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the Work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the Work or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

SECTION 00 5300 - PERFORMANCE BOND

**JNU Float Pond Improvements
Contract No. BE18-053**

IN WITNESS WHEREOF, this instrument is issued in two (2) identical counterparts, each one of which shall be deemed an original.

CONTRACTOR:

By: _____
(Signature)

(Printed Name)

(Company Name)

(Mailing Address)

(City, State, Zip Code)

SURETY:

By: _____
(Signature of Attorney-in-Fact)

Date Issued: _____

(Printed Name)

(Company Name)

(Mailing Address)

(City, State, Zip Code)

(Affix SURETY'S SEAL)

NOTE: If Contractor is Partnership, all Partners must execute bond.

SECTION 00 5400 - PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: That we _____
(Name of Contractor)

_____ a _____
(Corporation, Partnership, Individual)

hereinafter called "Principal" and _____
(Surety)

of _____, State of _____ hereinafter called the "Surety," are held and
firmly bound to the CITY AND BOROUGH of JUNEAU, ALASKA hereinafter called "Owner," for the
(Owner) (City and State)

penal sum of _____ Dollars
(\$ _____) in lawful money of the United States, for the payment of which sum well
and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and
severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Contractor has entered into a
certain contract with the Owner, the effective date of which is (CBJ Contracts Office to fill in effective date)
_____, a copy of which is hereto attached and made a part hereof for the construction
of:

**JNU Float Pond Improvements
Contract No. BE18-053**

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
Subcontractors, and corporations furnishing materials for, or performing labor in the prosecution of the Work
provided for in such contract, and any authorized extension or modification thereof, including all amounts due
for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or
used in connection with the construction of such Work, and all insurance premiums on said work, and for all
labor performed in such Work, whether by Subcontractor or otherwise, then this obligation shall be void;
otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no
change, extension of time, alteration or addition to the terms of the contract or to the Work to be performed
thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and
it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the
contract or to the Work or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Principal shall abridge
the right of any beneficiary hereunder, whose claim may be unsatisfied.

SECTION 00 5400 - PAYMENT BOND

**JNU Float Pond Improvements
Contract No. BE18-053**

IN WITNESS WHEREOF, this instrument is issued in two (2) identical counterparts, each one of which shall be deemed an original.

CONTRACTOR:

By: _____
(Signature)

(Printed Name)

(Company Name)

(Mailing Address)

(City, State, Zip Code)

SURETY:

By: _____
(Signature of Attorney-in-Fact)

Date Issued: _____

(Printed Name)

(Company Name)

(Mailing Address)

(City, State, Zip Code)

(Affix SURETY'S SEAL)

NOTE: If Contractor is Partnership, all Partners must execute bond.

SECTION 00 5420 - DBE PROGRAM

1. GENERAL

- A. Projects receiving federal grant funding require that Contractors comply with the Disadvantaged Business Enterprise Program (DBE) and complete and submit the forms, reports and documentation as described herein. Forms in this section include:
 - 1. Bidder Registration form (00 5420 – 3)
 - 2. DBE Utilization Report (00 5420 – 4)
 - 3. DBE Contact Report (00 5420 – 5 through 6)
 - 4. Summary of Good Faith Effort Documentation (00 5420 – 7)
 - 5. Annual Report: Summary of DBE Participation during Federal Fiscal Year (00 5420 - 8)
- B. Failure to comply with the provisions of this section is a material breach that may result in failure to award a contract, contract termination, or other remedy as CBJ deems appropriate.
- C. For assistance with DBE requirements, contact the DBE Administrator at Juneau International Airport (JNU) at (907)789-7821. The JNU administrative office is located at 1873 Shell Simmons Drive, Ste. 200, Juneau, Alaska 99801.
- D. JNU's race-neutral (aspirational) DBE Utilization Goal for this project is that at least 5.3% of the value of this contract be paid to DBEs. A DBE may act as a prime Contractor, Subcontractor, Service Provider, Material Supplier, Manufacturer, or combination of these.
- E. Subcontracting opportunities for this project include, but are not limited to: building construction, site prep, paving, concrete, electrical, framing, glazing, plumbing, doors, surveying, and seeding.

2. BIDDING REQUIREMENTS

- A. All Bidders must complete a Bidder Registration form for the Prime Contractor and submit at the time of bid with other required documents as provided in Section 00 4113.
- B. DBEs must be certified by the State of Alaska DOT&PF at the time of the bid opening to be counted toward the project's DBE goal.
- C. Prior to the scheduled pre-bid conference, each Bidder must solicit DBE participation to meet the stated DBE goal, even if its firm is capable of doing all the work. Bidders must meet the DBE goal or prove good faith efforts (GFEs) were taken to meet the goal. GFEs include, but are not limited to, the following:
 - 1. Advertise subcontracting opportunities in newspapers, trade publications and minority - focused media.
 - 2. Review and use the directories of certified DBEs available from the State of Alaska Department of Transportation & Public Facilities Civil Rights Office. (907) 269-0851.
 - 3. Contact specific DBEs in writing, giving enough time for effective participation.
 - 4. Break down contracts into units that allow DBE participation. This may include portions of work normally performed by your firm.
 - 5. Negotiate in good faith with DBEs for specific bids. Do not reject them as unqualified without a thorough investigation of their capabilities.
 - 6. Provide DBEs with information about the plans, specifications and contract requirements including bonding and insurance requirements.
 - 7. Provide DBEs with information about securing equipment, supplies, materials, or related assistance or services for the project.
 - 8. Attend the pre-bid conference to review DBE requirements.
- D. DBE subcontractors' bids that are more than 10 percent higher than an accepted non-DBE subcontractor's bid may be deemed non-competitive, provided they are for the exact same work or service. All evidence in support of a DBE's non-competitive bid determination must be provided

SECTION 00 5420 - DBE PROGRAM

in the Summary of GFE Documentation and DBE Contact Report. When a Bidder rejects a DBE subcontractor's bid as being non-competitive, the work must be performed by the non-DBE subcontractor whose bid was used to provide the basis of the determination in the amount stated in the DBE Utilization Report, except as modified by terms of the contract.

3. CONTRACT AWARD REQUIREMENTS

- A. The apparent low Bidder is required to submit the following completed DBE documents and submit them to the CBJ Contracts Office by 4:30 p.m. on the fifth business day following the Posting Notice date:
1. Bidder Registration form for all subcontractors and service providers, and a Bidder Registration form for each material supplier or manufacturer whose contract exceeds \$50,000.
 2. DBE Utilization Report
 3. DBE Contact Report (if DBE Utilization Goal was not achieved)
 4. Summary of Good Faith Effort Documentation (if DBE Utilization Goal was not achieved)
- B. When a Bidder fails to meet the DBE Utilization Goal, the following criteria will be used to determine whether or not sufficient GFEs have been demonstrated to be eligible for contract award.
1. The Bidder has sought out DBE participation for subcontractable components.
 2. All DBEs listed in the Alaska DOT/PF's current DBE Directory that indicate "Yes" under the specific Work Area (Region) were contacted and logged on a DBE Contact Report at least seven calendar days prior to bid opening. Acceptable methods of initial and follow up notification include:
 - a) By fax, with a confirmation receipt of successful transmission to the DBE's fax number listed in the DBE Directory.
 - b) By email, with confirmation of successful receipt by DBE's email address listed in the DBE Directory.
 - c) By mail to the DBE's address listed in the DBE Directory, with a return receipt requested. Delivery confirmation with evidence of successful delivery is an acceptable substitute for return receipt.
 - d) By telephone solicitation, with a record of the date and time of the telephone call made to the DBE's telephone number listed in the DBE Directory.

4. CONTRACT PERFORMANCE

- A. Once a contract is executed, a DBE subcontractor may only be replaced for failure to perform. Contractor must make a good faith effort to use another certified DBE. Contractor must get the DBE Administrator's written approval before replacement.
- B. The DBE must perform a commercially useful function. This means the DBE is responsible for execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved. The DBE may not subcontract out portions of its work, act as an employee of another Contractor on the project, or allow another Contractor to coordinate its employees, supplies, equipment, or business requirements without written approval from the DBE Administrator.
- C. By October 15th of each year, the Contractor shall submit to the DBE Administrator, an Annual Report that summarizes DBE participation in the project using the form provided in this section that covers the period of participation between October 1 and September 30 of the preceding federal fiscal year.

SECTION 00 5420 – DBE PROGRAM

CITY AND BOROUGH OF JUNEAU

BIDDER REGISTRATION

FAA-Funded Contracts - Juneau International Airport

JNU FLOAT POND IMPROVEMENTS

Contract No. BE18-053

All Bidders must complete this form for the Prime Contractor and submit it at the time of bid with other required documents as provided in Section 00 4113. This form must be also completed by each Subcontractor and Service Provider, as well as by each Material Supplier or Manufacturer whose products for the contract exceed \$50,000 and submitted to the CBJ Contracts Office by 4:30 p.m. on the fifth business day following the Posting Notice date.

Name of Firm: _____

Street Address: _____

Mailing Address: _____

Telephone Number: _____ Fax number: _____

E-mail Address: _____ Date Firm was Established: _____

Is this firm a (check all that apply):

Prime Contractor? [] Yes [] No

Subcontractor? [] Yes [] No

Service Provider? [] Yes [] No

Material Supplier? [] Yes [] No

Manufacturer? [] Yes [] No

Alaska DOT/PF Certified DBE? [] Yes [] No

Federally Certified Small Business? [] Yes [] No

Identify specialty:

Identify service:

Identify material:

Identify product:

If yes, please include a copy of the SBA Certificate.

NAICS Code

Firm's gross annual receipts:

[] < \$500,000

[] \$500,000 - \$999,999

[] \$1,000,000 - \$4,999,999

[] \$5,000,000 - \$9,999,999

[] \$10,000,000 - \$16,999,999

[] > \$17,000,000

Signature of Company Representative Title Date

Questions? Please contact the DBE Administrator at (907) 789-7821.

SECTION 00 5420 – DBE PROGRAM

CITY AND BOROUGH OF JUNEAU

DBE CONTACT REPORT

FAA-Funded Contracts - Juneau International Airport

JNU FLOAT POND IMPROVEMENTS

Contract No. BE18-053

Prime Contractor must submit this form if the DBE Utilization Goal was not met.

DBE FIRM CONTACTED:

Name Address Phone Number

SPECIFIC WORK OR MATERIALS (by Pay Item):

A. INITIAL CONTACT: (See Instructions on next page)

- 1. Date: Method: [] Phone [] Mail [] FAX [] Email
2. Person Contacted: Name Title
3. DBE's Response: Date: Method: [] Phone [] Mail [] FAX [] Email
[] Submitted an acceptable bid. (If bid accepted, skip to Section D)
[] Not interested: Indicate Reason(s):
[] Needs more information: Date Prime provided requested information:
[] Will provide bid by: Date:
[] Received unacceptable bid (complete Section C)

B. FOLLOW-UP CONTACT:

- 1. Date: Method: [] Phone [] Mail [] FAX [] Email
2. Person Contacted: Name Title
3. DBE's Response: Date: Method: [] Phone [] Mail [] FAX [] Email
[] Submitted an acceptable bid. (If bid accepted, skip to Section D)
[] Received unacceptable bid (complete Section C)
[] Other result:

C. EXPLANATION OF FAILURE TO ACHIEVE AN ACCEPTABLE BID:

- 1. Were the following Good Faith Efforts made?
a. [] Yes [] No Identified specific items of work, products, materials, etc. when asking for bid.
b. [] Yes [] No Informed DBE about the plans, specifications and contract requirements including bonding and insurance requirements.
2. Was the DBE's bid non-competitive (i.e., more than 10% higher than the accepted bid)? [] Yes [] No
3. Did the DBE indicate it was unable to perform in some capacity? [] Yes [] No If "Yes", explain:

D. CERTIFICATION: I certify that the information provided above is accurate and that efforts to solicit bids were made in good faith.

Signature of Prime (General) Contractor Title Date

INSTRUCTIONS

FIRM CONTACTED:

Enter name, address, and phone number of firm as it appears in the current Alaska DOT&PF DBE directory.

SPECIFIC WORK OR MATERIALS:

Identify the specific work item or material that you requested this firm to furnish.

A. INITIAL CONTACT: (Must be made at least seven calendar days prior to bid opening.)

1. Date and Method of Initial Contact: Indicate the method and date that actual contact was made or the date correspondence was postmarked. Leaving a "please call me" message does not constitute a contact. Attach a copy of dated letter or fax.
2. Name and Title of Person Contacted: Enter name and title of company representative with whom you corresponded or discussed submitting a bid.
3. DBE's Response: Check the appropriate boxes. If a firm bid was received and accepted, skip to section D.

B. FOLLOW-UP CONTACT:

If no response or an inconclusive response was received from the initial contact, a follow-up contact is required to determine for a certainty that the firm does not intend to submit a bid or to conclude discussions with a bid.

1. Date and Method of Follow-up Contact: Indicate the method and date that actual contact was made or the date correspondence was postmarked. Leaving a "please call me" message does not constitute a contact. Attach a copy of dated letter or fax.
2. Name and Title of Person Contacted: Enter name and title of company representative with whom you corresponded or discussed submitting a bid.
3. DBE's Response: Check the appropriate boxes. If a firm bid was received and accepted, skip to section D.

C. EXPLANATION OF FAILURE TO ACHIEVE AN ACCEPTABLE BID:

Check the appropriate box and provide explanation.

D. CERTIFICATION:

This certification of accuracy and Good Faith Effort by the Contractor to solicit bids from DBEs may be verified by contacting the listed firm. Failure to comply with the provisions of this section is a material breach that may result in failure to award a contract, contract termination, or other remedy as CBJ deems appropriate.

Questions? Please contact the DBE Administrator at (907) 789-7821.

CITY AND BOROUGH OF JUNEAU
SUMMARY OF GOOD FAITH EFFORT DOCUMENTATION

FAA-Funded Contracts - Juneau International Airport

JNU FLOAT POND IMPROVEMENTS

Contract No. BE18-053

Prime Contractor must submit this form if the DBE Utilization Goal was not met.

Prime Contractor: _____

In the spaces provided below, list all items considered for DBE utilization. If needed, list additional items and comments on reverse side. Attach completed DBE Contact Reports.

(A) Material or Specific Item of Work (Specify Pay Item)	(B) Acceptable DBE Bid Received? (Yes/No)	(C) Number of DBEs Contacted in Alaska DOT/PF DBE Directory	(D) Number of DBEs that Responded	(E) Number of DBE Bids Received
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

Questions? Please contact the DBE Administrator at (907) 789-7821.

SECTION 00 5420 – DBE PROGRAM

CITY AND BOROUGH OF JUNEAU

**ANNUAL REPORT: SUMMARY OF DBE PARTICIPATION
DURING FEDERAL FISCAL YEAR**

FAA-Funded Contracts - Juneau International Airport

JNU FLOAT POND IMPROVEMENTS

Contract No. BE18-053

By October 15th of each year, the Contractor must submit this form to the DBE Administrator, summarizing the actual DBE participation in the project between October 1 and September 30 of the preceding federal fiscal year.

Federal Year Reporting Period: from October 1, _____ (Year) through September 30, _____ (Year)

Contractor: _____

In the table below, identify "DBE Type" by one of the following: Prime Contractor ("P"); Subcontractor ("SUB"); Service Provider ("SP"); Material Supplier ("MS"); or Manufacturer ("MFG").

Firm Name	Identify DBE Type	Work Performed	Amount Paid This Reporting Period (Federal Fiscal Year)	Total Payment to Date
			\$	\$

.....
The undersigned attests that the information being provided herein is accurate and complete to the best of their knowledge. Further, the undersigned authorizes the City & Borough of Juneau, Juneau International Airport to verify the accuracy of the information provided.

Failure to comply with requirements of the DBE Program is a material breach that may result in contract termination or other remedy as the DBE Administrator deems appropriate.

Signature & Title of Contractor Representative

Date

Questions? Please contact the DBE Administrator at (907) 789-7821.

SECTION 00 5430 - FEDERAL VETS 4212

Federal Contractor Veterans' Employment Report (VETS-4212)

WHO MUST FILE: This VETS-4212 Report is to be completed by all nonexempt Federal contractors and subcontractors with a contract or subcontract in the amount of \$100,000 or more with any department or agency of the United States for the procurement of personal property or non-personal services. Services include but are not limited to the following services: utility, construction, transportation, research, insurance, and fund depository, irrespective of whether the government is the purchaser or seller. Entering into a covered Federal contract or subcontract during a given calendar year establishes the requirement to file a VETS-4212 Report during the following calendar year.

WHEN TO FILE: This annual report must be filed no later than September 30.

LEGAL BASIS FOR REPORTING REQUIREMENTS: Title 38, United States Code, Section 4212(d) mandates that Federal contractors and subcontractors subject to the statute's affirmative action provisions in 38 U.S.C. 4212(a) report, at least annually, the number of employees in their workforces by job category and hiring location, and the number of such employees, by job category and hiring location, who are qualified protected veterans. In addition, Federal contractors and subcontractors must report the total number of new hires during the period covered by the report and the number of such new hires who are qualified protected veterans. Further, Federal contractors and subcontractors must report on the maximum and minimum number of employees during the period covered by the report. The Department of Labor's Veterans' Employment and Training Service (VETS) has promulgated regulations found at 41 CFR part 61-300 to implement the reporting requirements of 38 U.S.C. 4212(d). The regulations require contractors and subcontractors to file the VETS-4212 Report to comply with the requirements of 38 U.S.C. 4212(d). The regulations in 41 CFR part 61-300 can be found at http://www.dol.gov/dol/cfr/Title_41/Chapter_61.htm.

HOW TO FILE THE VETS-4212 REPORT: The preferred method for filing VETS-4212 Reports is electronically through the VETS web-based filing system. Instructions for electronically filing the VETS-4212 Report are found on the VETS website at <http://www.dol.gov/vets/vets4212.htm>. Alternative filing methods are described below in these instructions.

Single Establishment Employers: Employers doing business at one hiring location may complete and submit a single VETS-4212 Report using the web-based filing system, or submit a single paper version of the VETS-4212 Report, as described below under Alternative Filing Methods.

Multi-Establishment Employers: Employers doing business at more than one hiring location, must file: (A) a VETS-4212 Report covering the principal or headquarters office; (B) a separate VETS-4212 Report for each hiring location employing 50 or more persons; and (C) EITHER, (i) a separate VETS-4212 Report for each hiring location employing fewer than 50 persons, OR (ii) consolidated reports that cover hiring locations within one State that have fewer than 50 employees. Multi-establishment employers doing business at more than 10 locations must submit their VETS-4212 Reports in the form of an electronic data file that complies with current Department of Labor specifications for the format of these records, and any other specifications established by the Department for the applicable reporting year. Multi-establishment employers with fewer than 10 hiring locations are strongly encouraged to submit their VETS-4212 Reports in the form of an electronic data file, but are not required to do so. In these cases, state consolidated reports count as one location each. VETS-4212 Reports in the form of electronic data files may be submitted through the web-based filing system. Electronic data files also may be transmitted electronically as an e-mail attachment (if they do not exceed the size stated in the specifications), or submitted on compact discs or other electronic storage media.

SECTION 00 5430 - FEDERAL VETS 4212

ALTERNATIVE FILING METHODS: The VETS-4212 Report may also be filed in paper format. Reporting organizations may download a paper version of the VETS-4212 Report from the VETS website at <http://www.dol.gov/vets/vets4212.htm> or send a written request for the paper version of the VETS-4212 Report to: Office of the Assistant Secretary for Veterans' Employment and Training, U.S. Department of Labor, 200 Constitution Avenue, NW, Room S-1325, Washington, DC 20210, Attn: VETS-4212 Report Form Request.

WHERE TO FILE: VETS-4212 Reports in paper format or electronic data files on compact discs or other electronic storage media may be delivered by U.S. mail or courier delivery service to: Veterans' Employment and Training Service, c/o Department of Labor National Contact Center, 15000 Conference Center Drive, Suite B0132, Chantilly, VA 20194. Paper copies of the VETS-4212 Reports and electronic data files (if they do not exceed the size stated in the specifications) also may be sent as e-mail attachments to: VETS4212-customersupport@dol.gov

HOW TO PREPARE THE VETS-4212 REPORT: All fields and answers to questions in all areas of the VETS-4212 Report are mandatory unless otherwise specified below. If the multi-establishment employer has hiring locations employing fewer than 50 persons, the employer may file separate reports for each hiring location or consolidated reports that cover multiple hiring locations within one state.

Type of Reporting Organization: Indicate the type of contractual relationship (prime contractor or subcontractor) that the organization has with the Federal Government. If the organization serves as both a prime contractor and a subcontractor on various federal contracts, check both boxes. If a reporting organization submits only one VETS-4212 Report for a single location, check the Single Establishment box. If the reporting organization submits more than one VETS-4212 Report, one report should be checked as Multiple Establishment-Headquarters. The remaining VETS-4212 Reports should be checked as either Multiple Establishment-Hiring Location or Multiple Establishment-State Consolidated. For state consolidated reports, the number of hiring locations included in that report should be entered in the space provided. For each report, only one box should be checked within this block.

Company Identification Information: . Please note: If a Federal Contractor Report has been filed in the past, you need to utilize the company number assigned in previously submitted reports. If a company number is not available please leave the field blank. If there are any questions regarding a Company Number, please call the VETS-4212 Customer Support Center at (866) 237-0275 or e-mail VETS4212-customersupport@dol.gov.

Twelve Month Period Ending: Enter the end date for the twelve month reporting period used as the basis for filing the VETS-4212 Report. To determine this period, select a date in the current year between July 1 and August 31 that represents the end of a payroll period. The selected date will be the basis for reporting the Number of Employees, as described below. The twelve-month period preceding that date is your twelve-month covered period. This period is the basis for reporting New Hires, as described below. Any Federal contractor or subcontractor that has written approval from the Equal Employment Opportunity Commission to use December 31 as the ending date for the EEO-1 Report may also use that date as the ending date for the payroll period selected for the VETS-4212 Report.

Name and Address for Single Establishment Employers: Complete the identifying information under the Parent Company name and address section.

Name and Address for Multi-Establishment Employers: For parent company headquarters location, complete the name and address for the parent company headquarters and leave blank the name and address of the Hiring Location. For hiring locations of a parent company, complete the address for the Parent Company location, complete the name and address for the Hiring Location.

SECTION 00 5430 - FEDERAL VETS 4212

NAICS Code, DUNS Number, and Employer ID Number: Single Establishment and Multi-Establishment Employers must complete the North American Industry Classification System (NAICS) Code, Dun and Bradstreet I.D. Number (DUNS), and Employer Identification Number (EIN) as described below:

- **NAICS Code:** Enter the six (6) digit NAICS Code applicable to the hiring location for which the report is filed. If there is not a separate NAICS Code for the hiring location, enter the NAICS Code for the Parent Company.
- **DUNS Number:** If there is a specific Dun and Bradstreet Identification applicable to the hiring location for which the report is filed, please enter the nine (9) digit in the space provided. If the hiring location does not have a DUNS Number, enter the DUNS number for the Parent Company. If an appropriate DUNS Number cannot be identified, leave this field blank.
- **Employer I.D. Number (EIN):** Enter the nine (9) digit number assigned by the I.R.S. to the contractor. If there is a specific EIN applicable to the hiring location for which the report is filed, enter that EIN. Otherwise, enter the EIN for the Parent Company.

Number of Employees: Report the total number of employees who are protected veterans for each of the 10 occupational categories (Lines 1.1 through 9) in column A. Report the total number of employees, including protected veterans, for each of the 10 occupational categories (Lines 1.1 through 9) in column B. Blank spaces will be considered zeros.

New Hires (Previous 12 Months): Report the total number of employees who were hired and included in the payroll for the first time during the 12-month period preceding the ending date of the selected payroll period. Report the total number of new hires who are protected veterans in column C. Report the total number of new hires, including protected veterans, in column D. Providing new hire data for each of the occupational categories (columns C and D, lines 1.1 through 9) is optional. Blank spaces will be considered zeros.

Maximum/Minimum Employees: Report the maximum and minimum number of employees on board during the twelve-month period covered by this report, as indicated by 41 CFR 61-300.10(a)(3).

DEFINITIONS:

'Employee' – means any individual on the payroll of an employer who is an employee for purposes of the employer's withholding of Social Security taxes except insurance sales agents who are considered to be employees for such purposes solely because of the provisions of 26 U.S.C. 3121 (d)(3)(B) (the Internal Revenue Code). Part-time employees and leased employees are included in the definition of 'employee.' The definition does not include persons hired on a casual basis for a specific job (e.g., persons at a construction site whose employment relationship is expected to terminate with the end of the employee's work at the site); persons employed temporarily in an industry other than construction who are hired through a hiring hall or some other referral arrangement; or persons on the payroll of an employment agency who are referred by such agency for work to be performed on the premises of another employer under that employer's direction and control, as provided in 41 CFR 61-300.2(b)(5).

'Hiring location' – means an establishment as defined at 41 CFR 61-300.2(b)(6).

'Job Categories' – means any of the following: Officials and Managers (Executive/Senior Level Officials and Managers and First/Mid-Level Officials and Managers), Professionals, Technicians, Sales Workers, Administrative Support Workers, Craft Workers, Operatives, Laborers and Helpers, and Service Workers and are defined in 41 CFR 61-300.2(b)(7).

'Protected Veteran' – means a veteran who is protected under the nondiscrimination and affirmative action provisions of the Vietnam Veterans' Readjustment Assistance Act, 38 U.S.C. 4212; specifically a veteran who may be classified as an active duty wartime or campaign badge veteran, disabled veteran, Armed Forces service medal veteran, or recently separated veteran,

SECTION 00 5430 - FEDERAL VETS 4212

- **'Active duty wartime or campaign badge Veteran'** – means a veteran who served on active duty in the U.S. military, ground, naval or air service during a war or in a campaign or expedition for which a campaign badge has been authorized under the laws administered by the Department of Defense.
- **'Armed Forces Service Medal Veteran'** – means any veteran who, while serving on active duty in the U.S. military, ground, naval or air service, participated in a United States military operation for which an Armed Forces service medal was awarded pursuant to Executive Order 12985 (61 FR 1209, 3 CFR, 1996 Comp., p. 159).
- **'Disabled Veteran'** – means (1) A veteran of the U.S. military, ground, naval or air service who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Secretary of Veterans Affairs, or (2) A person who was discharged or released from active duty because of a service-connected disability.
- **'Recently Separated Veteran'** – means a veteran during the three-year period beginning on the date of such veteran's discharge or release from active duty in the U.S. military, ground, naval or air service.

RECORD KEEPING: Employers must keep a copy of the completed annual VETS-4212 Report(s) submitted to DOL for a period of three years.

Public Burden Statement: Public reporting burden for this collection is estimated to average 20 minutes per location to make an electronic filing and 40 minutes per location to make a paper filing, including the time for reviewing instructions, searching existing data source, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Department of Labor, Veterans' Employment and Training Service, Office of Information Management, Room N-1316, 200 Constitution Avenue, NW, Washington D.C. 20210 or electronically transmitted to VETS4212-customersupport@dol.gov All completed VETS-4212 Reports should be sent to the address indicated on the front of the form. See actual VETS-4212 Report for additional disclosures.

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

PART 1 - GENERAL

1.1 GENERAL

- A. Definitions. As used in these Specifications:
1. “Covered area” means the geographical area described in the solicitation from which this contract resulted;
 2. “Director” means Director, Office of Federal contract Compliance Programs (OFCCP), United States Department of Labor (DOL), or any persons to whom the Director delegates authority;
 3. “Employer” identification number” means the Federal Social Security number used on the Employer’s Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 4. “Minority” includes:
 - a. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - b. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central of South American or other Spanish culture or origin, regardless of race);
 - c. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - d. American Indian or Alaska Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
- B. Whenever the Contractor, or any Subcontractor at any tier, subcontract a portion of the Work, involving any construction trade, it shall physically include in each Subcontract in excess of \$10,000 the provisions of these Specification and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
- C. The Contractor shall implement the specific affirmative action standards provided in paragraphs F1 through F16 of these Specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goal in each craft during the period specified.
- Covered construction contractors performing construction Work in geographical areas where they do not have a federal or federally-assisted construction contract shall apply the minority and female goals established for the geographical area where the Work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any OFCCP office or from federal procurement contracting officers.
- D. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor’s obligations under this Specification, Executive Order 11246, or the regulations promulgated pursuant thereto.

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

- E. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period of an approved training program and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities.
- F. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this Specification shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative actions steps at least as extensive as the following:
1. Ensure and maintain a working environment free of harassment, intimidation; and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to Work. The Contractor, where possible, shall assign two or more women to each construction project. The Contractor shall specifically ensure that all superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligations to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor, by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 4. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or women sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the DOL. The Contractor shall provide notice of these programs to the sources complied under F2 above.
 6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction Work is performed.

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

7. Review, at least annually, the company's EEO policy and affirmative action obligations under these Specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendent, etc., prior to the initiation of construction Work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and dispositions of the subject matter.
 8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.
 9. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.
 11. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR 60-3.
 12. Conduct at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 13. Ensure that seniority practices, job classifications, Work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel, and employment related activities to ensure that the EEO policy and the Contractor's obligations under these Specifications are being carried out.
 14. Ensure that all facilities and company activities are nonsegregated except that separate or single-used toilet, necessary changing facilities and necessary sleeping facilities shall be provided to assure privacy between the sexes.
 15. Document and maintain a record of all solicitations of offers for Subcontractors from minority and female construction contractors and suppliers, including circulations of solicitations to minority and female contractor associations and other business associations.
 16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- G. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations F1 through F16. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any or more of its obligations under F1 through F16 of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

- H. A single goal for minorities and a separate goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally the Contractor may be in violation of the Executive Order if a specific minority group of women is under utilized.)
- I. The Contractor shall not use the goals and timetables of affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- J. The Contractor shall not enter into any Subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.
- K. The Contractor shall carry out such sanctions or penalties for violation of these Specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing Subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these Specifications and Executive Order 11236, as amended.
- L. The Contractor, in fulfilling its obligations under these Specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph F of these Specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunities. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these Specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- M. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic apprentice, trainees, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that the existing records satisfy this requirement, contractors shall not be required to maintain separate records.
- N. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish difference standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Programs).

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

- O. The bidder’s attention is called to the “Equal Employment Clause” and the “Standard Federal Equal Employment Opportunity Construction Contract Specifications” set forth herein.
- P. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor’s aggregate work force in each trade on all construction work in the covered area, are as set forth in item S.

These goals as listed in Item S are applicable to all the Contractor’s construction Work (whether or not it is federal or federally-assisted) performed in the covered area.

The Contractor’s compliance with the Executive Order and the regulations in 41 CFR 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the Specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. If the Contractor performs construction Work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the Work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally and non-federally involved construction.

The hours on minority and female employment and training must be substantially uniform throughout the length of the contract and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the Contractor’s goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total WORK hours performed.

- Q. The Contractor shall provide written notification to the Owner, for all subcontract documents as follows: the name, address and telephone number of Subcontractors and their employer identification number; the estimated dollar amount of the subcontracts; estimated starting and completion dates of the subcontracts; and the geographical area in which the contract is to be performed.

This written notification shall be required for all construction subcontracts in excess of \$10,000 at any tier for construction Work under the contract resulting from this Project’s solicitation.

- R. As used in the Bid Notice, and in the contract resulting from this project’s solicitation, the “covered area” is the State of Alaska.

S. Goal and Timetable

- 1. The following goal and timetable for female utilization shall be included in all federal and federally-assisted construction contracts and subcontracts in excess of \$1,000. The goal is applicable to the Contractor’s aggregate on-site construction work force whether or not part of that work force is performing Work on a federal or federally-assisted construction contractor or subcontract.

ALASKA GOAL AND TIMETABLE FOR WOMEN*

<u>Timetable</u>	<u>Goal</u> **
Until Further Notice	6.9%

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

- 2. The following goals and timetable for minority utilization shall be included in all federal or federally-assisted construction contracts and subcontracts in excess of \$10,000 to be performed in Alaska. The goals are applicable to the Contractor’s aggregate on-site construction work force whether or not part of that work force is performing Work on a federal or federally-assisted construction contract or subcontract.

ALASKA GOAL AND TIMETABLE FOR MINORITY UTILIZATION

<u>Timetable</u>	<u>Economic Area (ES)***</u>	<u>Goal **</u>
Until Further Notice	Anchorage SMSA Area	8.7%
	Remainder of State	15.1%

* The goal and timetable for women listed above applies to Alaska as well as nationwide.

** The Director, from time to time, shall issue goals and timetables for minority and female utilization which shall be based on appropriate work force, demographic or other relevant data and which shall cover construction projects, or construction contracts performed in specific geographical areas. The goals shall be applicable to each construction trade in a covered contractor’s or subcontractor’s entire work force which is working in the area covered by the goals and timetables, shall be published as notices in the Federal Register, and shall be inserted by the contracting officers and applicants, as applicable, in the Notice required by 41 CFR 60-4.2. Covered construction contractors performing construction Work in geographical areas where they do not have a federal or federally-assisted construction contract shall apply the minority and female goals established for the geographical area where the WORK is being performed.

*** Refer to the Standard Metropolitan Statistical Areas (SMSA) and Economic Areas (EA), office of Management and Budget, 1975.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

A. Complete the following forms (included as part of this section). Items 1-4 will be due with the Agreement and other information required in the Notice of Intent to Award.

- 1. EEO-1 Certification Federal Aid contracts
- 2. EEO Estimated Employment Profile
- 3. EEO Notice to Labor Unions, Minority/Women Organization
- 4. EEO Signature Page
- 5. EEO Weekly Payroll Report

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

CITY AND BOROUGH OF JUNEAU

EEO-1 CERTIFICATION

US DOT Federal-Aid Contracts

JNU FLOAT POND IMPROVEMENTS

BE18-053

This certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor [41 CFR 60-1.7 (b) (1)] and must be completed by the successful Bidder and each proposed Subcontractor participating in this contract.

PLEASE CHECK APPROPRIATE BOXES

The Bidder Proposed Subcontractor hereby CERTIFIES:

PART A. Bidders and proposed Subcontractors with 50 or more year-round employees and a federal contract amounting to \$50,000 or more are required to submit one federal Standard Report Form 100 during each year that the two conditions exist (50 employees and a \$50,000 federal contract).

The company named below (Part C) is exempt from the requirements of submitting the Standard Report Form 100 this year.

NO (go to PART B) YES (go to PART C)

Instructions and blank Standard Report Form 100's may be obtained from a local U.S. Department of Labor office, or by writing to:

US Department of Labor
The Joint Reporting Committee
P.O. Box 19100
Washington, D.C. 20036-9100

Telephone number: (757) 461-1213

PART B. The company named below has submitted the Standard Report Form 100 this year.

NO YES

Note: Bidders and proposed Subcontractors who have not filed the required Standard Report Form 100 and are not exempt from filing requirements will not be awarded this contract or subcontract until Form 100 has been filed for the current year ending June 30.

PART C.

Signature of Authorized Company Representative

Title

Company Name

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

Date

() _____
Phone Number

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

Estimated Employment Profile

Firm: _____ Prepared By: _____

In response to the Notice of Intent to Award letter, **the prime Contractor and each Subcontractor must submit a complete profile**

Total Number of Employees to Work on Project:	Male _____	Female _____
Projected Tradeworker Hours ¹ :	Male _____	Female _____
Total Number of Minorities to Work on Project:	Male _____	Female _____
Projected Minority Tradeworkers Hours ² :	Male _____	Female _____
Projected Tradeworker Goal Attainment ³ :	Minority _____%	Female _____%

List the number and gender of ALL tradeworkers anticipated on this Project:

Trade⁴	Asian-Indian	Asian-Pacific	Black	Hispanic	Native	White
<i>Crew Supervisor⁵</i>	_____	_____	_____	_____	_____	_____

Apprentices or Trainees

¹Total for all tradeworkers (including minorities and females).

²Minority female tradeworker hours may count toward only one goal, either female or minority, **but not both**. If a minority female’s hours are counted as minority, rather than female, add her hours to those of the male minorities’ before calculating projected goal attainment.

³To calculate project goal attainment: Add total male to total female hours to determine the total hours for the job. Divide the minority hours by the total hours for the job; the percentage result is the projected minority goal. Divide female hours by the total hours for the job, the percentage result is the projected female goal.

⁴List Journey Trades, such as *Carpenter, Electrician, Ironworker, Laborer, Painter, Plumber, Power Equipment Operator*, etc.

⁵Example:

Trade	Asian-Indian	Asian-Pacific	Black	Hispanic	Native	White
<i>CREW SUPERVISOR</i>					<i>1M</i>	
<i>PILEDRIVER</i>				<i>2M</i>	<i>1F</i>	
<i>APPRENTICE (OPERATING ENGINEER)</i>			<i>1M</i>			

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

Notice to Labor Unions, Minority/Women Organizations

To be completed by each Contractor and Subcontractor, regardless of the value of their contract. If no union, job service program, or labor organization is involved write and attach a letter stating how employees were recruited.

To: _____
(Name of labor union or other employment organization)

We currently hold a prime contract, or subcontract with the City and Borough of Juneau which involves federal funds. Under the provisions of the contract and all subcontracts, in accordance with Section 202 of Executive Order No. 11246 as amended, we are obliged not to discriminate against any employee or applicant for employment because of race, color, creed, national origin, age, or sex. This obligation not to discriminate in employment includes, but is not limited to: employment, upgrading, transfer, demotion, recruitment, and advertising; rates of pay or other forms of compensation; selection for training including apprenticeship; and layoff or termination.

We will post this notice in conspicuous places available to employees or applicants for employment.

(Firm)

_____ EEO Representative at Job Site	_____ Date	_____ EEO Representative at Office	_____ Date
---	---------------	---------------------------------------	---------------

↓ To be completed by labor union or other organization ↓

The _____ agrees to comply with all applicable
(Name of labor union or other labor organization)

federal, state, and local laws* regarding non-discrimination** in employment.*** We also agree to provide the Employer with all information necessary to enable it to comply with these laws,* including the preparation and filing of any necessary reports.

*Laws include regulations, rules, directives and orders, including those by the Equal Opportunity Commission, the Office of Federal contract Compliance, the United States Department of Labor, and the federal funding agency when applicable to WORK performed on this contract.

** Non-discrimination includes freedom from discrimination because of race, color, national origin, creed, religion, age or sex.

*** Employment includes acceptance, selection, classification and referral of applicants for membership and/or employment.

Name and Title of Labor Representative

Signature

Date

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

Signature Page

In response to the Notice of Intent to Award letter, the Prime Contractor and each Subcontractor **must** complete and return this Signature Page and be current with all EEO* filing requirements.

* contracts and Subcontracts which do not exceed \$10,000 are exempt from the requirements of the equal opportunity clause, provided, that where a contractor has contracts or subcontracts containing federal assistance in any 12-month period, which have an aggregate total value (or can reasonably be expected to have an aggregate total value) exceeding \$10,000, this \$10,000 or under exemption does not apply (regardless of whether any single contract exceeds \$10,000.)

I certify that I have met all applicable EEO requirements and all attached documents are complete and correct. I understand that any false statements made to meet any requirement will result in contract termination and/or action under Federal or State law. I swear that neither the firm, nor its owners or principals, is debarred or suspended from contracting with any government agency.

Firm _____ Capacity: Prime Sub

Type of WORK _____ Employer ID No. _____

Estimated Start Date _____ Estimated Finish Date _____

contract or Subcontract Amount \$ _____ Agreement Date _____

Authorized Signature _____ Date _____

Printed Name _____ Title _____

Firm's DBE Officer _____

Firm's EEO Officer _____

Street Address _____

City _____ State _____ Zip _____

PHONE _____ FAX _____

SECTION 00 5500 – FEDERAL EEO BID CONDITIONS

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

Weekly Payroll Report

Each Contractor and each Subcontractor must complete, sign, and submit this form **each week** during the length of the contract. Subcontractors should report only for their subcontract. EEO goal compliance is measured against tradeworker hours.

Firm _____ Capacity: Prime Sub

Type of WORK _____

Percent Complete _____ Week Ending _____

Street Address _____

City _____ State _____ Zip _____

Prepared by _____ Date _____

List: Each **minority** and **female** tradeworker employee, who worked this period.

<u>Construction Trade</u> ¹	<u>Work Classification</u> ²	<u>Ethnicity</u> ³	<u>Sex</u>	<u>Employee's Name</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Tradeworker Totals: Entire Crew: Hrs. # _____ Hrs. _____
Minority: Hrs. # _____ Hrs. _____
Female: Hrs. # _____ Hrs. _____

¹i.e., Concrete, Demolition, Electrical, Iron, and Operating Engineer
²i.e., Crew Supervisor, Journey Level, Apprentice, Helper, Etc.
³iAI-Asian Indian, AP-Asian Pacific, B-Black, C-Caucasian, H-Hispanic, N-Native, or O-Other

**SECTION 00 5600 - FEDERAL LABOR STANDARDS, REPORTING, AND
PREVAILING WAGE RATE DETERMINATION
Reporting During Contract**

- A. **Within 15 Days after Notice of Intent to Award**, the Contractor must compile and submit a list of all Subcontractors and material suppliers, showing all tiers. For each company listed include name, address, phone, employer tax number; DBE status if any; estimated subcontract amount; estimated start and finish dates; and copies of bid tabulations with firm name and number. Send the list to *Addresses B and C*.
- B. **Within 30 Days of Notice to Proceed**, the Contractor and each Subcontractor, who are required to file EEO-1 reports (Standard Form 100 [SF-100]), must send it to the Office of Federal Contract Compliance Programs (OFCCP) Area Office - Address C.
- C. Before each Friday, the Contractor and each Subcontract must file:
1. Weekly Employment Opportunity (EEO) Reports (page 00 4440-11) for the previous week to *Address A*. If the information requested (race and gender) is indicated on the copy of the payroll, then this Weekly EEO Report is hereby waived.
- D. **Certified Payrolls must be submitted every two weeks.** Before the second Friday, the Contractor and each Subcontractor must file:
1. Certified Payrolls with Statements of Compliance for the previous two weeks. If there was no activity for that pay period, indicate "No Activity." Indicate "Start" on your first payroll, and "Final" on your last payroll for this project. Send the original to *Address B* and a complete copy to *Address A, or another CBJ representative, as designated*

Correspondence regarding State of Alaska Department of Labor and Workforce Development (ADOL) Title 36 requirements may be submitted electronically or paper copies can be submitted by mail. To submit Title 36 documents electronically, go to <https://myalaska.state.ak.us/home/app>. If filing electronically, submit certified payrolls to ADOL at the website above and email a copy of all certified payrolls to Jennifer Mannix, or her designee, at the email address below. If Contractor elects to submit paper copies, they should be submitted to the physical addresses below.

- E. By the 5th of each month, each Contractor and Subcontractor must complete the Monthly Employment Utilization Report (CC257) for the previous month for its aggregate workforce in Alaska (for federal and non-federal projects). Make a list of all projects (federal and non-federal) in Alaska over \$10,000. Include the firm name, name and location of project, project #, % complete, contract amount, and established date of completion. Send both the CC257 and the list of projects to Addresses A and C.
- F. Preparing the final payment request, the Contractor must verify that the subcontractor list is up-to-date and includes all parties submitting certified payrolls (i.e., equipment rental with operator companies, trucking services providing imported materials, surveying firms, etc.). Send a copy of amended lists to Addresses A and B. Submit completed Compliance Certification and Release, Section 006200 of the CBJ Standard Specifications for Civil Engineering Project and Subdivision Improvements, December 2003 Edition, with current Errata, for the Contractor to Address A.

<i>Address A</i>	<i>Address B</i>	<i>Address C</i>
Contract Administrator	Wage and Hour Section	OFCCP
Engineering Department	AK Dept of Labor and Workforce Dev/	Area Office
City and Borough of Juneau	Labor Standards and Safety Division	605 W. 4th Ave., Room G68
155 S. Seward Street	Wage and Hour Administration	Anchorage, AK 99501
Juneau, AK 99801	P O Box 21149	(907) 271-2864
(907) 586-0873	Juneau, AK 99802-1149	
greg.smith@juneau.org	(907) 465-4842	
	http://labor.state.ak.us/lss/home.htm	



Laborers' & Mechanics' Minimum Rates of Pay

Effective April 1, 2018
Issue 36

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THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of Labor and
Workforce Development**

Office of the Commissioner

Post Office Box 111149
Juneau, Alaska 99811
Main: 907.465.2700
fax: 907.465-2784

April 1, 2018

TO ALL CONTRACTING AGENCIES:

At the Alaska Department of Labor and Workforce Development, our goal is putting Alaskans to work. This pamphlet is designed to help contractors awarded public construction contracts understand the most significant laws of the State of Alaska pertaining to prevailing wage and resident hire requirements.

This pamphlet identifies current prevailing wage rates and resident hire classifications for public construction contracts (any construction projects awarded for the State of Alaska or its political subdivisions, such as local governments and certain non-profit organizations). Because these rates may change, this publication is printed in the spring and fall of every year, so please be sure you are using the appropriate rates. The rates published in this edition become effective April 1, 2018.

All projects with a final bid date of April 11, 2018, or later, must pay the prevailing wage rates contained in this pamphlet. As the law now provides, these rates will remain stable during the life of a contract or for 24 calendar months, whichever is shorter. **The 24-month period begins on the date the prime contract is awarded.** Upon expiration of the initial 24-month period, the latest wage rates issued by the department shall become effective for a subsequent 24-month period or until the original contract is completed, whichever occurs first. This process shall be repeated until the original contract is completed.

The term "original contract" means the signed contract that resulted from the original bid and any amendments, including changes of work scope, additions, extensions, change orders, and other instruments agreed to by the parties that have not been subject to subsequent open bid procedures.

If a higher federal rate is required due to partial federal funding or other federal participation, the higher rate must be paid.

For additional copies of this pamphlet, contact the nearest office of the Division of Labor Standards and Safety, Wage and Hour office or the Web address at: <http://labor.state.ak.us/lss/pamp600.htm>

For questions regarding prevailing wage or employment preference requirements, please contact the nearest Wage and Hour office. These offices are listed on Page xi.

Sincerely,

A handwritten signature in black ink that reads "Heidi Drygas".

Heidi Drygas
Commissioner

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Note to Readers: The statutes and administrative regulations listed in this publication were taken from the official codes, as of the effective date of the publication. However, there may be errors or omissions that have not been identified and changes that occurred after the publication was printed. This publication is intended as an informational guide only and is not intended to serve as a precise statement of the statutes and regulations of the State of Alaska. To be certain of the current laws and regulations, please refer to the official codes.

EXCERPTS FROM ALASKA LAW

(The following statute (36.05.005) applies to projects bid on or after October 20, 2011)

Sec. 36.05.005. Applicability.

This chapter applies only to a public construction contract that exceeds \$25,000.

Sec. 36.05.010. Wage rates on public construction.

A contractor or subcontractor who performs work on a public construction contract in the state shall pay not less than the current prevailing rate of wages for work of a similar nature in the region in which the work is done. The current prevailing rate of wages is that contained in the latest determination of prevailing rate of wages issued by the Department of Labor and Workforce Development at least 10 days before the final date for submission of bids for the contract. The rate shall remain in effect for the life of the contract or for 24 calendar months, whichever is shorter. At the end of the initial 24-month period, if new wage determinations have been issued by the department, the latest wage determination shall become effective for the next 24-month period or until the contract is completed, whichever occurs first. This process shall be repeated until the contract is completed.

Sec. 36.05.040. Filing schedule of employees, wages paid, and other information.

All contractors or subcontractors who perform work on a public construction contract for the state or for a political subdivision of the state shall, before the Friday of every second week, file with the Department of Labor and Workforce Development a sworn affidavit for the previous reporting period, setting out in detail the number of persons employed, wages paid, job classification of each employee, hours worked each day and week, and other information on a form provided by the Department of Labor and Workforce Development.

Sec. 36.05.045. Notice of work and completion; withholding of payment.

- (a) Before commencing work on a public construction contract, the person entering into the contract with a contracting agency shall designate a primary contractor for purposes of this section. Before work commences, the primary contractor shall file a notice of work with the Department of Labor and Workforce Development. The notice of work must list work to be performed under the public construction contract by each contractor who will perform any portion of work on the contract and the contract price being paid to each contractor. The primary contractor shall pay all filing fees for each contractor performing work on the contract, including a filing fee based on the contract price being paid for work performed by the primary contractor's employees. The filing fee payable shall be the sum of all fees calculated for each contractor. The filing fee shall be one percent of each contractor's contract price. The total filing fee payable by the primary contractor under this subsection may not exceed \$5,000. In this subsection, "contractor" means an employer who is using employees to perform work on the public construction contract under the contract or a subcontract.
- (b) Upon completion of all work on the public construction contract, the primary contractor shall file with the Department of Labor and Workforce Development a notice of completion together with payment of any additional filing fees owed due to increased contract amounts. Within 30 days after the department's receipt of the primary contractor's notice of completion, the department shall inform the contracting agency of the amount, if any, to be withheld from the final payment.
- (c) A contracting agency
 - (1) may release final payment of a public construction contract to the extent that the agency has received verification from the Department of Labor and Workforce Development that
 - (A) the primary contractor has complied with (a) and (b) of this section;
 - (B) the Department of Labor and Workforce Development is not conducting an investigation under this title; and
 - (C) the Department of Labor and Workforce Development has not issued a notice of a violation of this chapter to the primary contractor or any other contractors working on the public construction contract; and

- (2) shall withhold from the final payment an amount sufficient to pay the department's estimate of what may be needed to compensate the employees of any contractors under investigation on this construction contract, and any unpaid filing fees.
- (d) The notice and filing fee required under (a) of this section may be filed after work has begun if
 - (1) The public construction contract is for work undertaken in immediate response to an emergency; and
 - (2) The notice and fees are filed not later than 14 days after the work has begun.
- (e) A false statement made on a notice required by this section is punishable under AS 11.56.210.

Sec. 36.05.060. Penalty for violation of this chapter.

A contractor who violates this chapter is guilty of a misdemeanor and upon conviction is punishable by a fine of not less than \$100 nor more than \$1,000, or by imprisonment for not less than 10 days nor more than 90 days, or by both. Each day a violation exists constitutes a separate offense.

Sec. 36.05.070. Wage rates in specifications and contracts for public works.

- (a) The advertised specifications for a public construction contract that requires or involves the employment of mechanics, laborers, or field surveyors must contain a provision stating the minimum wages to be paid various classes of laborers, mechanics, or field surveyors and that the rate of wages shall be adjusted to the wage rate under AS 36.05.010.
- (b) Repealed by §17 ch 142 SLA 1972.
- (c) A public construction contract under (a) of this section must contain provisions that
 - (1) the contractor or subcontractors of the contractor shall pay all employees unconditionally and not less than once a week;
 - (2) wages may not be less than those stated in the advertised specifications, regardless of the contractual relationship between the contractor or subcontractors and laborers, mechanics, or field surveyors;
 - (3) 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;
 - (4) the state or a political subdivision 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
 - (A) the rates of wages required by the contract to be paid laborers, mechanics, or field surveyors on the work; and
 - (B) the rates of wages in fact received by laborers, mechanics, or field surveyors.

Sec. 36.05.080. Failure to pay agreed wages.

Every contract within the scope of AS 36.05.070 shall contain a provision that if it is found that a laborer, mechanic, or field surveyor employed by the contractor or subcontractor has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid, the state or its political subdivision may, by written notice to the contractor, terminate the contractor's right to proceed with the work or the part of the work for which there is a failure to pay the required wages and to prosecute the work to completion by contract or otherwise, and the contractor and the contractor's sureties are liable to the state or its political subdivision for excess costs for completing the work.

Sec. 36.05.090. Payment of wages from withheld payments and listing contractors who violate contracts.

- (a) The state disbursing officer in the case of a state public construction contract and the local fiscal officer in the case of a political subdivision public construction contract shall pay directly to laborers, mechanics, or field surveyors from accrued payments withheld under the terms of the contract the wages due laborers, mechanics, or field surveyors under AS 36.05.070.
- (b) The state disbursing officer or the local fiscal officer shall distribute to all departments of the state government and to all political subdivisions of the state a list giving the names of persons who have disregarded their obligations to employees. A person appearing on this list and a firm, corporation,

partnership, or association in which the person has an interest may not work as a contractor or subcontractor on a public construction contract for the state or a political subdivision of the state until three years after the date of publication of the list. If the accrued payments withheld under the contract are insufficient to reimburse all the laborers, mechanics, or field surveyors with respect to whom there has been a failure to pay the wages required under AS 36.05.070, the laborers, mechanics, or field surveyors have the right of action or intervention or both against the contractor and the contractor's sureties conferred by law upon persons furnishing labor or materials, and in the proceedings it is not a defense that the laborers, mechanics, or field surveyors accepted or agreed to accept less than the required rate of wages or voluntarily made refunds.

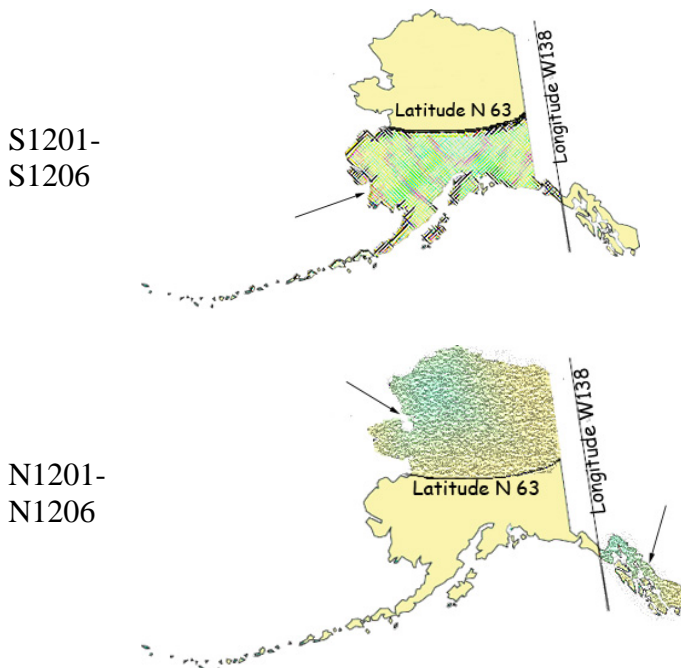
Sec. 36.05.900. Definition.

In this chapter, "contracting agency" means the state or a political subdivision of the state that has entered into a public construction contract with a contractor.

ADDITIONAL INFORMATION

LABORER CLASSIFICATION CLARIFICATION

The laborer rates categorized in class code S1201-S1206 apply in one area of Alaska; the area that is south of N63 latitude and west of W138 Longitude. The laborer rates categorized in class code N1201-N1206 apply in two areas of Alaska; the Alaska areas north of N63 latitude and east of W138 longitude. The following graphic representations should assist with clarifying the applicable wage rate categories:



ACCOMMODATIONS AND PER DIEM

The Alaska Department of Labor and Workforce Development has adopted a per diem requirement for blocklayers, bricklayers, carpenters, dredgemen, heat & frost insulators/asbestos workers, ironworkers, laborers, operative plasterers & cement masons, painters, piledrivers, power equipment operators, roofers, surveyors, truck

drivers/surveyors, and tunnel workers. This per diem rate creates an allowable alternative to providing board and lodging under the following conditions:

Employer-Provided Camp or Suitable Accommodations

Unless otherwise approved by the Commissioner, the employer shall ensure that a worker who is employed on a project that is 65 road miles or more from the international airport in either Fairbanks, Juneau or Anchorage or is inaccessible by road in a 2-wheel drive vehicle and who is not a domiciled resident of the locality of the project shall receive meals and lodging. Lodging shall be in accordance with all applicable state and federal laws. In cases where the project site is not road accessible, but the employee can reasonably get to the project worksite from their permanent residence within one hour, the Commissioner may waive these requirements for that employee upon a written request from the employer.

The term “domiciled resident” means a person living within 65 road miles of the project, or in the case of a highway project, the mid-point of the project, for at least 12 consecutive months prior to the award of the project. However, if the employer or person provides sufficient evidence to convince the department that a person has established a permanent residence and an intent to remain indefinitely within the distance to be considered a “domiciled resident,” the employer shall not be required to provide meals and lodging or pay per diem.

Where the employer provides or furnishes board, lodging or any other facility, the cost or amount thereof shall not be considered or included as part of the required prevailing wage basic hourly rate and cannot be applied to meet other fringe benefit requirements. The taxability of employer provided board and lodging shall be determined by the appropriate taxation enforcement authority.

Per Diem

Employers are encouraged to use commercial facilities and lodges; however, when such facilities are not available, per diem in lieu of meals and lodging must be paid at the basic rate of \$75.00 per day, or part thereof, the worker is employed on the project. Per diem shall not be allowed on highway projects west of Livengood on the Elliott Highway, at Mile 0 of the Dalton Highway to the North Slope of Alaska, north of Mile 20 on the Taylor Highway, east of Chicken, Alaska, on the Top of the World Highway and south of Tetlin Junction to the Alaska-Canada border.

The above-listed standards for room and board and per diem only apply to the crafts as identified in Pamphlet 600, *Laborers’ and Mechanics’ Minimum Rates of Pay*. Other crafts working on public construction projects shall be provided room and board at remote sites based on the department’s existing policy guidelines. In the event that a contractor provides lodging facilities, but no meals, the department will accept payment of \$36 per day for meals to meet the per diem requirements.

**** NEW ** APPRENTICE HIRING REQUIREMENTS**

On November 5, 2015, Governor Walker signed Administrative Order No. 278 to help ensure that there is an adequate pool of well-trained Alaskan construction workers to satisfy the industry needs. AO 278 replaced AO 226 and established a 15 percent goal for hiring federally registered apprentices in certain job categories on all public construction projects awarded by the Alaska Department of Transportation and Public Facilities and the Alaska Department of Administration that exceed \$2.5 million. The Order requires the commissioners of DOTPF and DOA to strive to require not less than 15 percent labor hours on a qualified project are performed by federally registered apprentices in the following classifications:

- | | | |
|---------------|-----------------------------------|--------------------------|
| Boilermakers | Elevator Constructors & Mechanics | Plumbers and Pipefitters |
| Bricklayers | Insulation Workers | Roofers |
| Carpenters | Ironworkers | Sheetmetal Workers |
| Cement Masons | Laborers | Surveyors |

Culinary Workers
Electricians
Equipment Operators

Mechanics
Millwrights
Painters
Piledriving Occupations

Sprinkler Fitters
Truck Drivers
Tug Boat Workers
Welders

A federally registered apprentice is enrolled in an apprentice training program under 29 U.S.C. 50 and 29 C.F.R. 29.1 – 29.13. Contractors will be expected to file apprentice utilization forms throughout the project or utilize the online certified payroll filing system available on the My Alaska website. A copy of AO 278 may be viewed in its entirety at <http://gov.state.ak.us/admin-orders/278.html> or call any Wage and Hour office to receive a copy.

APPRENTICE RATES

Apprentice rates at less than the minimum prevailing rates may be paid to apprentices according to an apprentice program which has been registered and approved by the Commissioner of the Alaska Department of Labor and Workforce Development in writing or according to a bona fide apprenticeship program registered with the U.S. Department of Labor, Office of Apprenticeship Training. **Any employee listed on a payroll at an apprentice wage rate who is not registered as above shall be paid the journeyman prevailing minimum wage in that work classification.** Wage rates are based on prevailing crew makeup practices in Alaska and apply to work performed regardless of either the quality of the work performed by the employee or the titles or classifications which may be assigned to individual employees.

FRINGE BENEFIT PLANS

Contractors/subcontractors may compensate fringe benefits to their employees in any one of three methods. The fringe benefits may be paid into a union trust fund, into an approved benefit plan, or paid directly on the paycheck as gross wages.

Where fringe benefits are paid into approved plans, funds, or programs including union trust funds, the payments must be contributed at least monthly. If contractors submit their own payroll forms and are paying fringe benefits into approved plans, funds, or programs, the employer's certification must include, in addition to those requirements of 8 AAC 30.020(c), a statement that fringe benefit payments have been or will be paid at least monthly. Contractors who pay fringe benefits to a plan must ensure the plan is one approved by the Internal Revenue Service and that the plan meets the requirements of 8 AAC 30.025 (eff. 3/2/08) in order for payments to be credited toward the prevailing wage obligation.

SPECIAL PREVAILING WAGE RATE DETERMINATION

Special prevailing wage rate determinations may be requested for special projects or a special worker classification if the work to be performed does not conform to traditional public construction for which a prevailing wage rate has been established under 8 AAC 30.050(a) of this section. Requests for special wage rate determinations must be in writing and filed with the Commissioner at least 30 days before the award of the contract. An applicant for a special wage rate determination shall have the responsibility to support the necessity for the special rate. An application for a special wage rate determination filed under this section must contain:

- (1) a specification of the contract or project on which the special rates will apply and a description of the work to be performed;
- (2) a brief narrative explaining why special wage rates are necessary;
- (3) the job class or classes involved;
- (4) the special wage rates the applicant is requesting, including survey or other relevant wage data to support the requested rates;
- (5) the approximate number of employees who would be affected; and
- (6) any other information which might be helpful in determining if special wage rates are appropriate.

Requests made pursuant to the above should be addressed to:

Director
Alaska Department of Labor and Workforce Development
Labor Standards & Safety Division
Wage and Hour Administration
P.O. Box 111149
Juneau, AK 99811-1149

-or-

Email: statewide.wagehour@alaska.gov

**LABOR STANDARDS REGULATIONS
NOTICE REQUEST**

If you would like to receive *notices of proposed changes to regulations* for Wage and Hour or Mechanical Inspection, please indicate below the programs for which you are interested in receiving such notices, print your name and email or mailing address in the space provided, and send this page to:

Alaska Department of Labor and Workforce Development
Labor Standards & Safety Division
Wage and Hour Administration
1251 Muldoon Road, Suite 113
Anchorage, AK 99504-2098
Email: statewide.wagehour@alaska.gov

For *REGULATIONS* information relating to any of the following:

- Wage and Hour Title 23 Employment Practices
- Wage and Hour Title 36 Public Works
- Employment Agencies
- Child Labor
- Employment Preference (Local Hire)
- Plumbing Code
- Electrical Code
- Boiler/Pressure Vessel Construction Code
- Elevator Code
- Certificates of Fitness
- Recreational Devices

Request any of the following *PUBLICATIONS* by checking below:

- | | |
|--|---|
| <input type="checkbox"/> Wage and Hour Title 23 Employment Practices | <input type="checkbox"/> Public Construction Pamphlet |
| <input type="checkbox"/> Minimum Wage & Overtime Poster | <input type="checkbox"/> Public Construction Wage Rates |
| <input type="checkbox"/> Child Labor Poster | <input type="checkbox"/> Child Labor Pamphlet |

PLEASE NOTE: DUE TO INCREASED MAILING AND PRINTING COSTS, ONLY ONE OF EACH PUBLICATION REQUESTED WILL BE MAILED TO YOU. IF YOU WISH TO RECEIVE ADDITIONAL COPIES OR SUBSEQUENT PUBLICATIONS, PLEASE CONTACT OUR OFFICE AT (907) 269-4900.

Name: _____

Mailing Address: _____

Email Address: _____

**DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT
ALASKA EMPLOYMENT PREFERENCE INFORMATION**

By authority of AS 36.10.150 and 8 AAC 30.064, the Commissioner of Labor and Workforce Development has determined the State of Alaska to be a Zone of Underemployment. A Zone of Underemployment requires that Alaska residents who are eligible under AS 36.10.140 be given a minimum of 90 percent employment preference on public works contracts throughout the state in certain job classifications. **This 90 percent Alaska resident hiring preference applies on a project-by-project, craft-by-craft or occupational basis and must be met each workweek by each contractor/subcontractor in each of the following classifications:**

Boilermakers	Electricians	Laborers	Roofers
Bricklayers	Engineers & Architects	Mechanics	Sheet Metal Workers
Carpenters	Equipment Operators	Millwrights	Surveyors
Cement Masons	Foremen & Supervisors	Painters	Truck Drivers
Culinary Workers	Insulation Workers	Piledriving Occupations	Tug Boat Workers
	Ironworkers	Plumbers & Pipefitters	Welders

This determination became effective July 1, 2017, and remains in effect through June 30, 2019. This determination will be applied to projects with a bid submission deadline on or after July 1, 2017 and to projects previously covered by the 2015 Alaska employment preference determination. This will afford contractors an opportunity to consider the impacts of Alaska resident hire in their bids.

The first person on a certified payroll in any classification is called the "first worker" and is not required to be an Alaskan resident. However, once the contractor adds any more workers in the classification, then all workers in the classification are counted, and the 90 percent calculation is applied to compute the number of required Alaskans to be in compliance. To compute the number of Alaskan residents required in a workweek in a particular classification, multiply the total number of workers in the classification by 90 percent. The result is then rounded down to the nearest whole number to determine the number of Alaskans that must be employed in that classification.

If a worker works in more than one classification during a week, the classification in which they spent the most time would be counted for employment preference purposes. If the time is split evenly between two classifications, the worker is counted in both classifications.

If you have difficulty meeting the 90 percent requirement, an approved waiver must be obtained before a non-Alaska resident is hired who would put the contractor/subcontractor out of compliance (8 AAC 30.081 (e) (f)). The waiver process requires proof of an adequate search for qualified Alaskan workers. Qualified Alaska residents identified through the search must be hired before waivers for non-resident workers may be granted. To apply for a waiver, contact the nearest Wage and Hour Office for instructions.

Here is an example to apply the 90 percent requirement to four boilermaker workers. Multiply four workers by 90% and drop the fraction ($.90 \times 4 = 3.6 - .6 = 3$). The remaining number is the number of Alaskan resident boilermakers required to be in compliance in that particular classification for that week.

The penalties for being out of compliance are serious. AS 36.10.100 (a) states "A contractor who violates a provision of this chapter shall have deducted from amounts due to the contractor under the contract the prevailing wages which should have been paid to a displaced resident and these amounts shall be retained by the contracting agency." If a contractor/subcontractor is found to be out of compliance, penalties accumulate until they come into compliance.

Contractors are responsible for determining residency status. If you have difficulty determining whether a worker is an Alaska resident, you should contact the nearest Wage and Hour Office. Contact Wage and Hour in Anchorage at (907) 269-4900, in Fairbanks at (907) 451-2886, or in Juneau at (907) 465-4842.

Alaska Department of Labor and Workforce Development
Labor Standards & Safety Division
Wage and Hour Administration
Web site: <http://labor.state.ak.us/lss/pamp600.htm>

Anchorage

1251 Muldoon Road, Suite 113
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Phone: (907) 269-4900

Email:
statewide.wagehour@alaska.gov

Juneau

1111 W. 8th Street, Suite 302
Juneau, Alaska 99801
Phone: (907) 465-4842

Email:
statewide.wagehour@alaska.gov

Fairbanks

Regional State Office Building
675 7th Ave., Station J-1
Fairbanks, Alaska 99701-4593
Phone: (907) 451-2886

Email:
statewide.wagehour@alaska.gov

DEBARMENT LIST

AS 36.05.090(b) states that “the state disbursing officer or the local fiscal officer shall distribute to all departments of the state government and to all political subdivisions of the state a list giving the names of persons who have disregarded their obligations to employees.”

A person appearing on the following debarment list and a firm, corporation, partnership, or association in which the person has an interest may not work as a contractor or subcontractor on a public construction contract for the state or a political subdivision of the state for three years from the date of debarment.

Company Name

Debarment Expires

Pyramid Audio & Video, Ltd.
Jeffrey P. Schneider, Individual
Tim Banach, Individual
Boulder Creek Electric

June 19, 2018
June 19, 2018
February 23, 2021
February 23, 2021

Laborers' & Mechanics' Minimum Rates of Pay

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Boilermakers

A0101	Boilermaker (journeyman)	44.26	8.57	15.34	1.60	VAC 3.00	SAF 0.34	73.11
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Bricklayers & Blocklayers

**See note on last page if remote site

A0201	Blocklayer	40.81	9.58	8.50	0.55	L&M 0.15	0.61	60.20
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Bricklayer
Marble or Stone Mason
Refractory Worker (Firebrick, Plastic, Castable, and Gunitite Refractory Applications)
Terrazzo Worker
Tile Setter

A0202	Tuck Pointer Caulker	40.81	9.58	8.50	0.55	L&M 0.15	0.61	60.20
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Cleaner (PCC)

A0203	Marble & Tile Finisher	34.79	9.58	8.50	0.55	L&M 0.15	0.61	54.18
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Terrazzo Finisher

A0204	Torginal Applicator	38.83	9.58	8.50	0.55	L&M 0.15	0.61	58.22
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Carpenters, Statewide

**See note on last page if remote site

A0301	Carpenter (journeyman)	38.34	9.83	14.63	0.70	L&M 0.10	SAF 0.10	63.70
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Lather/Drywall/Acoustical

Cement Masons, Region I (North of N63 latitude)

**See note on last page if remote site

N0401	Group I, including:	37.88	8.21	11.80	1.18	L&M 0.10		59.17
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Application of Sealing Compound
Application of Underlayment
Building, General
Cement Mason (journeyman)
Concrete

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
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Cement Masons, Region I (North of N63 latitude)

**See note on last page if remote site

N0401 Group I, including:	37.88	8.21	11.80	1.18	L&M 0.10	59.17
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- Concrete Paving
- Curb & Gutter, Sidewalk
- Curing of All Concrete
- Grouting & Caulking of Tilt-Up Panels
- Grouting of All Plates
- Patching Concrete
- Screed Pin Setter
- Spackling/Skim Coating

N0402 Group II, including:	37.88	8.21	11.80	1.18	L&M 0.10	59.17
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- Form Setter

N0403 Group III, including:	37.88	8.21	11.80	1.18	L&M 0.10	59.17
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- Concrete Saw (self-powered)
- Curb & Gutter Machine
- Floor Grinder
- Pneumatic Power Tools
- Power Chipping & Bushing
- Sand Blasting Architectural Finish
- Screed & Rodding Machine Operator
- Troweling Machine Operator

N0404 Group IV, including:	37.88	8.21	11.80	1.18	L&M 0.10	59.17
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- Application of All Composition Mastic
- Application of All Epoxy Material
- Application of All Plastic Material
- Finish Colored Concrete
- Gunite Nozzleman
- Hand Powered Grinder
- Tunnel Worker

N0405 Group V, including:	38.13	8.21	11.80	1.18	L&M 0.10	59.42
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- Plasterer

Cement Masons, Region II (South of N63 latitude)

**See note on last page if remote site

S0401 Group I, including:	37.63	8.21	11.80	1.18	L&M 0.10	58.92
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Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Cement Masons, Region II (South of N63 latitude)

**See note on last page if remote site

							L&M	
S0401	Group I, including:	37.63	8.21	11.80	1.18	0.10		58.92
	Application of Sealing Compound							
	Application of Underlayment							
	Building, General							
	Cement Mason (journeyman)							
	Concrete							
	Concrete Paving							
	Curb & Gutter, Sidewalk							
	Curing of All Concrete							
	Grouting & Caulking of Tilt-Up Panels							
	Grouting of All Plates							
	Patching Concrete							
	Screed Pin Setter							
	Spackling/Skim Coating							
S0402	Group II, including:	37.63	8.21	11.80	1.18	0.10		58.92
	Form Setter							
S0403	Group III, including:	37.63	8.21	11.80	1.18	0.10		58.92
	Concrete Saw (self-powered)							
	Curb & Gutter Machine							
	Floor Grinder							
	Pneumatic Power Tools							
	Power Chipping & Bushing							
	Sand Blasting Architectural Finish							
	Screed & Rodding Machine Operator							
	Troweling Machine Operator							
S0404	Group IV, including:	37.63	8.21	11.80	1.18	0.10		58.92
	Application of All Composition Mastic							
	Application of All Epoxy Material							
	Application of All Plastic Material							
	Finish Colored Concrete							
	Gunite Nozzleman							
	Hand Powered Grinder							
	Tunnel Worker							
S0405	Group V, including:	37.88	8.21	11.80	1.18	0.10		59.17
	Plasterer							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Culinary Workers * See note on last page							
A0501	Baker/Cook	28.37	7.40	6.97		LEG 0.07	42.81
A0503	General Helper	25.05	7.40	6.97		LEG 0.07	39.49
	Housekeeper						
	Janitor						
	Kitchen Helper						
A0504	Head Cook	28.97	7.40	6.97		LEG 0.07	43.41
A0505	Head Housekeeper	25.45	7.40	6.97		LEG 0.07	39.89
	Head Kitchen Help						
Dredgemen							
**See note on last page if remote site							
A0601	Assistant Engineer	39.51	9.80	12.25	1.00	L&M 0.10	62.66
	Craneman						
	Electrical Generator Operator (primary pump/power barge/dredge)						
	Engineer						
	Welder						
A0602	Assistant Mate (deckhand)	38.35	9.80	12.25	1.00	L&M 0.10	61.50
A0603	Fireman	38.79	9.80	12.25	1.00	L&M 0.10	61.94
A0605	Leverman Clamshell	42.04	9.80	12.25	1.00	L&M 0.10	65.19
A0606	Leverman Hydraulic	40.28	9.80	12.25	1.00	L&M 0.10	63.43
A0607	Mate & Boatman	39.51	9.80	12.25	1.00	L&M 0.10	62.66
A0608	Oiler (dredge)	38.79	9.80	12.25	1.00	L&M 0.10	61.94
Electricians							
A0701	Inside Cable Splicer	39.82	13.05	13.63	0.95	L&M 0.20 LEG 0.15	67.80

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Electricians

A0702	Inside Journeyman Wireman, including: Technicians	39.49	13.05	13.87	0.95	L&M	LEG	67.71
A0703	Power Cable Splicer	54.39	13.05	18.82	0.95	0.20	0.15	87.56
A0704	Tele Com Cable Splicer	48.70	13.05	15.48	0.95	L&M	LEG	78.53
A0705	Power Journeyman Lineman, including: Power Equipment Operator Technician	52.64	13.05	18.77	0.95	L&M	LEG	85.76
A0706	Tele Com Journeyman Lineman, including: Technician Tele Com Equipment Operator	46.95	13.05	15.43	0.95	L&M	LEG	76.73
A0707	Straight Line Installer - Repairman	46.95	13.05	15.43	0.95	L&M	LEG	76.73
A0708	Powderman	50.64	13.05	18.71	0.95	L&M	LEG	83.70
A0710	Material Handler	26.57	12.27	4.80	0.15	L&M	LEG	44.09
A0712	Tree Trimmer Groundman	27.54	13.05	11.82	0.15	L&M	LEG	52.86
A0713	Journeyman Tree Trimmer	36.21	13.05	12.08	0.15	L&M	LEG	61.79
A0714	Vegetation Control Sprayer	39.66	13.05	12.18	0.15	L&M	LEG	65.34
A0715	Inside Journeyman Communications CO/PBX	38.07	13.05	13.58	0.95	L&M	LEG	66.00

Elevator Workers

A0802	Elevator Constructor	38.82	15.42	16.61	0.61	L&M	VAC	75.86
A0803	Elevator Constructor Mechanic	55.45	15.42	16.61	0.61	L&M	VAC	94.61

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Heat & Frost Insulators/Asbestos Workers

**See note on last page if remote site

A0902	Asbestos Abatement-Mechanical Systems	38.68	9.24	11.01	1.20		SAF	60.25
A0903	Asbestos Abatement/General Demolition All Systems	38.68	9.24	11.01	1.20		SAF	60.25
A0904	Insulator, Group II	38.68	9.24	11.01	1.20		SAF	60.25
A0905	Fire Stop	38.68	9.24	11.01	1.20		SAF	60.25

IronWorkers

**See note on last page if remote site

A1101	Ironworkers, including:	37.25	8.33	20.53	1.57		L&M	IAF	68.24
	Bender Operators								
	Bridge & Structural								
	Machinery Mover								
	Ornamental								
	Reinforcing								
	Rigger								
	Sheeter								
	Signalman								
	Stage Rigger								
	Toxic Haz-Mat Work								
	Welder								
A1102	Helicopter	38.25	8.33	20.53	1.57		L&M	IAF	69.24
	Tower (energy producing windmill type towers to include nacelle and blades)								
A1103	Fence/Barrier Installer	33.75	8.33	20.28	1.47		L&M	IAF	64.39
	Guard Rail Installer								
A1104	Guard Rail Layout Man	34.49	8.33	20.28	1.47		L&M	IAF	65.13

Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

N1201	Group I, including:	30.26	8.70	17.06	1.25		L&M	LEG	57.67
	Asphalt Worker (shovelman, plant crew)								

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

					L&M	LEG	
N1201	Group I, including:	30.26	8.70	17.06	1.25	0.20	0.20 57.67
	Brush Cutter						
	Camp Maintenance Laborer						
	Carpenter Tender or Helper						
	Choke Setter, Hook Tender, Rigger, Signalman						
	Concrete Labor (curb & gutter, chute handler, curing, grouting, sack & patch, screeding)						
	Crusher Plant Laborer						
	Demolition Laborer						
	Ditch Digger						
	Dumpman						
	Environmental Laborer (hazard/toxic waste, oil spill)						
	Fence Installer						
	Fire Watch Laborer						
	Flagman						
	Form Stripper						
	General Laborer						
	Guardrail Laborer, Bridge Rail Installer						
	Hydro-seeder Nozzleman						
	Laborer, Building						
	Landscaper or Planter						
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block 4 feet or less - highway or landscape work)						
	Material Handler						
	Pneumatic or Power Tools						
	Portable or Chemical Toilet Serviceman						
	Pump Man or Mixer Man						
	Railroad Track Laborer						
	Sandblast, Pot Tender						
	Saw Tender						
	Slurry Work						
	Steam Cleaner Operator						
	Steam Point or Water Jet Operator						
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)						
	Tank Cleaning						
	Utiliwalk & Utilidor Laborer						
	Watchman (construction projects)						
	Window Cleaner						

					L&M	LEG	
N1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20 58.67

Burning & Cutting Torch

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
N1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20	58.67
	Cement or Lime Dumper or Handler (sack or bulk)							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Choker Splicer							
	Chucktender (wagon, air-track & hydraulic drills)							
	Concrete Laborer (power buggy, concrete saws, pumpcrete nozzleman, vibratorman)							
	Culvert Pipe Laborer							
	Cured Inplace Pipelayer							
	Environmental Laborer (asbestos, marine work)							
	Floor Preparation, Core Drilling							
	Foam Gun or Foam Machine Operator							
	Green Cutter (dam work)							
	Gunite Operator							
	Hod Carrier							
	Jackhammer/Chipping Gun or Pavement Breaker							
	Laser Instrument Operator							
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work)							
	Mason Tender & Mud Mixer (sewer work)							
	Pilot Car							
	Pipelayer Helper							
	Plasterer, Bricklayer & Cement Finisher Tender							
	Powderman Helper							
	Power Saw Operator							
	Railroad Switch Layout Laborer							
	Sandblaster							
	Scaffold Building & Erecting							
	Sewer Caulker							
	Sewer Plant Maintenance Man							
	Thermal Plastic Applicator							
	Timber Faller, Chainsaw Operator, Filer							
	Timberman							

						L&M	LEG	
N1203	Group III, including:	32.16	8.70	17.06	1.25	0.20	0.20	59.57
	Bit Grinder							
	Camera/Tool/Video Operator							
	Guardrail Machine Operator							
	High Rigger & Tree Topper							
	High Scaler							
	Multiplate							
	Plastic Welding							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
N1203	Group III, including:	32.16	8.70	17.06	1.25	0.20	0.20	59.57

- Slurry Seal Squeegee Man
- Traffic Control Supervisor
- Welding Certified (in connection with laborer's work)

						L&M	LEG	
N1204	Group IIIA	35.44	8.70	17.06	1.25	0.20	0.20	62.85

- Asphalt Raker, Asphalt Belly Dump Lay Down
- Drill Doctor (in the field)
- Driller (including, but not limited to, wagon drills, air-track drills, hydraulic drills)
- Pioneer Drilling & Drilling Off Tugger (all type drills)
- Pipelayers
- Powderman (Employee Possessor)
- Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)
- Traffic Control Supervisor, DOT Qualified

						L&M	LEG	
N1205	Group IV	19.83	8.70	17.06	1.25	0.20	0.20	47.24

- Final Building Cleanup
- Permanent Yard Worker

						L&M	LEG	
N1206	Group IIIB	38.98	5.99	17.06	1.25	0.20	0.20	63.68

- Federal Powderman (Responsible Person in Charge)
- Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
- Stake Hopper

Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S1201	Group I, including:	30.26	8.70	17.06	1.25	0.20	0.20	57.67

- Asphalt Worker (shovelman, plant crew)
- Brush Cutter
- Camp Maintenance Laborer
- Carpenter Tender or Helper
- Choke Setter, Hook Tender, Rigger, Signalman
- Concrete Labor (curb & gutter, chute handler, curing, grouting, sack & patch, screeding)
- Crusher Plant Laborer
- Demolition Laborer
- Ditch Digger

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

					L&M	LEG	
S1201	Group I, including:	30.26	8.70	17.06	1.25	0.20	0.20 57.67

- Dumpman
- Environmental Laborer (hazard/toxic waste, oil spill)
- Fence Installer
- Fire Watch Laborer
- Flagman
- Form Stripper
- General Laborer
- Guardrail Laborer, Bridge Rail Installer
- Hydro-seeder Nozzleman
- Laborer, Building
- Landscaper or Planter
- Laying of Mortarless Decorative Block (retaining walls, flowered decorative block 4 feet or less - highway or landscape work)
- Material Handler
- Pneumatic or Power Tools
- Portable or Chemical Toilet Serviceman
- Pump Man or Mixer Man
- Railroad Track Laborer
- Sandblast, Pot Tender
- Saw Tender
- Slurry Work
- Steam Cleaner Operator
- Steam Point or Water Jet Operator
- Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)
- Tank Cleaning
- Utiliwalk & Utilidor Laborer
- Watchman (construction projects)
- Window Cleaner

					L&M	LEG	
S1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20 58.67

- Burning & Cutting Torch
- Cement or Lime Dumper or Handler (sack or bulk)
- Certified Erosion Sediment Control Lead (CESCL Laborer)
- Choker Splicer
- Chucktender (wagon, air-track & hydraulic drills)
- Concrete Laborer (power buggy, concrete saws, pumpcrete nozzleman, vibratorman)
- Culvert Pipe Laborer
- Cured Inplace Pipelayer
- Environmental Laborer (asbestos, marine work)

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20	58.67
	Floor Preparation, Core Drilling							
	Foam Gun or Foam Machine Operator							
	Green Cutter (dam work)							
	Gunite Operator							
	Hod Carrier							
	Jackhammer/Chipping Gun or Pavement Breaker							
	Laser Instrument Operator							
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work)							
	Mason Tender & Mud Mixer (sewer work)							
	Pilot Car							
	Pipelayer Helper							
	Plasterer, Bricklayer & Cement Finisher Tender							
	Powderman Helper							
	Power Saw Operator							
	Railroad Switch Layout Laborer							
	Sandblaster							
	Scaffold Building & Erecting							
	Sewer Caulker							
	Sewer Plant Maintenance Man							
	Thermal Plastic Applicator							
	Timber Faller, Chainsaw Operator, Filer							
	Timberman							
S1203	Group III, including:	32.16	8.70	17.06	1.25	0.20	0.20	59.57
	Bit Grinder							
	Camera/Tool/Video Operator							
	Guardrail Machine Operator							
	High Rigger & Tree Topper							
	High Scaler							
	Multiplate							
	Plastic Welding							
	Slurry Seal Squeegee Man							
	Traffic Control Supervisor							
	Welding Certified (in connection with laborer's work)							
S1204	Group IIIA	35.44	8.70	17.06	1.25	0.20	0.20	62.85
	Asphalt Raker, Asphalt Belly Dump Lay Down							
	Drill Doctor (in the field)							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S1204	Group IIIA	35.44	8.70	17.06	1.25	0.20	0.20	62.85

- Driller (including, but not limited to, wagon drills, air-track drills, hydraulic drills)
- Pioneer Drilling & Drilling Off Tugger (all type drills)
- Pipelayers
- Powderman (Employee Possessor)
- Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)
- Traffic Control Supervisor, DOT Qualified

						L&M	LEG	
S1205	Group IV	19.83	8.70	17.06	1.25	0.20	0.20	47.24

- Final Building Cleanup
- Permanent Yard Worker

						L&M	LEG	
S1206	Group IIIB	38.98	5.99	17.06	1.25	0.20	0.20	63.68

- Federal Powderman (Responsible Person in Charge)
- Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
- Stake Hopper

Millwrights

						L&M		
A1251	Millwright (journeyman)	36.74	9.83	12.28	1.00	0.40	0.05	60.30

						L&M		
A1252	Millwright Welder	37.74	9.83	12.28	1.00	0.40	0.05	61.30

Painters, Region I (North of N63 latitude)

**See note on last page if remote site

						L&M		
N1301	Group I, including:	32.19	8.11	11.90	1.08	0.07		53.35

- Brush
- General Painter
- Hand Taping
- Hazardous Material Handler
- Lead-Based Paint Abatement
- Roll

						L&M		
N1302	Group II, including:	32.71	8.11	11.90	1.08	0.07		53.87

- Bridge Painter

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Painters, Region I (North of N63 latitude)

**See note on last page if remote site

N1302 Group II, including:	32.71	8.11	11.90	1.08		L&M	0.07	53.87
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- Epoxy Applicator
- General Drywall Finisher
- Hand/Spray Texturing
- Industrial Coatings Specialist
- Machine/Automatic Taping
- Pot Tender
- Sandblasting
- Specialty Painter
- Spray
- Structural Steel Painter
- Wallpaper/Vinyl Hanger

N1304 Group IV, including:	39.38	8.11	14.23	1.05		0.05		62.82
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- Glazier
- Storefront/Automatic Door Mechanic

N1305 Group V, including:	29.23	8.11	5.02	0.83		0.07		43.26
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- Carpet Installer
- Floor Coverer
- Heat Weld/Cove Base
- Linoleum/Soft Tile Installer

Painters, Region II (South of N63 latitude)

**See note on last page if remote site

S1301 Group I, including :	30.23	8.11	11.85	1.08		L&M	0.07	51.34
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- Brush
- General Painter
- Hand Taping
- Hazardous Material Handler
- Lead-Based Paint Abatement
- Roll
- Spray

S1302 Group II, including :	31.48	8.11	11.85	1.08		L&M	0.07	52.59
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- General Drywall Finisher
- Hand/Spray Texturing
- Machine/Automatic Taping
- Wallpaper/Vinyl Hanger

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Painters, Region II (South of N63 latitude)

**See note on last page if remote site

							L&M	
S1303	Group III, including :	31.58	8.11	11.85	1.08		0.07	52.69
	Bridge Painter							
	Epoxy Applicator							
	Industrial Coatings Specialist							
	Pot Tender							
	Sandblasting							
	Specialty Painter							
	Structural Steel Painter							

							L&M	
S1304	Group IV, including:	39.63	8.11	13.23	1.08		0.07	62.12
	Glazier							
	Storefront/Automatic Door Mechanic							

							L&M	
S1305	Group V, including:	29.23	8.11	5.02	0.83		0.07	43.26
	Carpet Installer							
	Floor Coverer							
	Heat Weld/Cove Base							
	Linoleum/Soft Tile Installer							

Piledrivers

**See note on last page if remote site

							L&M	IAF	
A1401	Piledriver	38.34	9.83	14.63	0.70		0.10	0.10	63.70
	Assistant Dive Tender								
	Carpenter/Piledriver								
	Rigger								
	Sheet Stabber								
	Skiff Operator								

							L&M	IAF	
A1402	Piledriver-Welder/Toxic Worker	39.34	9.83	14.63	0.70		0.10	0.10	64.70

							L&M	IAF	
A1403	Remotely Operated Vehicle Pilot/Technician	42.65	9.83	14.63	0.70		0.10	0.10	68.01
	Single Atmosphere Suit, Bell or Submersible Pilot								

							L&M	IAF	
A1404	Diver (working) ***See note on last page	82.45	9.83	14.63	0.70		0.10	0.10	107.81

							L&M	IAF	
A1405	Diver (standby) ***See note on last page	42.65	9.83	14.63	0.70		0.10	0.10	68.01

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Piledrivers
 **See note on last page if remote site

A1406	Dive Tender ***See note on last page	41.65	9.83	14.63	0.70	L&M	IAF	67.01
						0.10	0.10	
A1407	Welder (American Welding Society, Certified Welding Inspector)	43.90	9.83	14.63	0.70	L&M	IAF	69.26
						0.10	0.10	

Plumbers, Region I (North of N63 latitude)

N1501	Journeyman Pipefitter	40.91	8.25	15.75	1.25	L&M	S&L	67.26
	Plumber					1.10		
	Welder							

Plumbers, Region II (South of N63 latitude)

S1501	Journeyman Pipefitter	39.00	9.58	13.87	1.25	L&M		63.90
	Plumber					0.20		
	Welder							

Plumbers, Region IIA (1st Judicial District)

X1501	Journeyman Pipefitter	38.02	13.37	11.25	2.50	L&M		65.38
	Plumber					0.24		
	Welder							

Power Equipment Operators
 **See note on last page if remote site

A1601	Group I, including:	40.28	9.80	12.25	1.00	L&M		63.43
	Asphalt Roller: Breakdown, Intermediate, and Finish							
	Back Filler							
	Barrier Machine (Zipper)							
	Beltcrete with Power Pack & similar conveyors							
	Bending Machine							
	Boat Coxswain							
	Bulldozer							
	Cableways, Highlines & Cablecars							
	Cleaning Machine							
	Coating Machine							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Power Equipment Operators

**See note on last page if remote site

						L&M	
A1601	Group I, including:	40.28	9.80	12.25	1.00	0.10	63.43
	Concrete Hydro Blaster						
	Cranes (45 tons & under or 150 feet of boom & under (including jib & attachments))						
	(a) Hydralifts or Transporters, (all track or truck type)						
	(b) Derricks						
	(c) Overhead						
	Crushers						
	Deck Winches, Double Drum						
	Ditching or Trenching Machine (16 inch or over)						
	Drag Scraper, Yarder, and similar types						
	Drilling Machines, Core, Cable, Rotary and Exploration						
	Finishing Machine Operator, Concrete Paving, Laser Screed, Sidewalk, Curb & Gutter Machine						
	Helicopters						
	Hover Craft, Flex Craft, Loadmaster, Air Cushion, All-Terrain Vehicle, Rollagon, Bargecable, Nodwell, & Snow Cat						
	Hydro Ax, Feller Buncher & similar						
	Hydro Excavation (Vac-Truck and Similar)						
	Licensed Line & Grade						
	Loaders (2 1/2 yards through 5 yards, including all attachments):						
	(a) Forklifts (with telescopic boom & swing attachment)						
	(b) Front End & Overhead, (2-1/2 yards through 5 yards)						
	(c) Loaders, (with forks or pipe clamp)						
	(d) Loaders, (elevating belt type, Euclid & similar types)						
	Material Transfer Vehicle (Elevating Grader, Pickup Machine, and similar types)						
	Mechanic, Welder, Bodyman, Electrical, Camp & Maintenance Engineer						
	Micro Tunneling Machine						
	Mixers: Mobile type with hoist combination						
	Motor Patrol Grader						
	Mucking Machine: Mole, Tunnel Drill, Horizontal/Directional Drill Operator and/or Shield						
	Off-Road Hauler (including Articulating and Haul Trucks)						
	Operator on Dredges						
	Piledriver Engineer, L.B. Foster, Puller or similar paving breaker						
	Plant Operator (Asphalt & Concrete)						
	Power Plant, Turbine Operator 200 k.w & over (power plants or combination of power units over 300 k.w.)						
	Remote Controlled Equipment						
	Scraper (through 40 yards)						
	Service Oiler/Service Engineer						
	Shot Blast Machine						

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Power Equipment Operators

**See note on last page if remote site

A1601 Group I, including:	40.28	9.80	12.25	1.00	L&M		0.10	63.43
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- Shovels, Backhoes, Excavators with all attachments, and Gradealls (3 yards & under)
- Sideboom (under 45 tons)
- Spreaders Topside (Asphalt Paver, Slurry machine, and similar types)
- Sub Grader (Gurries, Reclaimer & similar types)
- Tack Tractor
- Truck Mounted Concrete Pump, Conveyor/Tele-belt, & Creter
- Wate Kote Machine

A1602 Group IA, including:	42.04	9.80	12.25	1.00	L&M		0.10	65.19
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- Camera/Tool/Video Operator (Slipline)
- Certified Welder, Electrical Mechanic, Camp Maintenance Engineer, Mechanic (over 10,000 hours)
- Cranes (over 45 tons or 150 feet including jib & attachments)
 - (a) Clamshells & Draglines (over 3 yards)
 - (b) Tower Cranes
- Licensed Water/Waste Water Treatment Operator
- Loaders (over 5 yards)
- Motor Patrol Grader, Dozer, Grade Tractor, Roto-Mill/Profiler (finish: when finishing to final grade and/or to hubs, or for asphalt)
- Power Plants (1000 k.w. & over)
- Quad
- Scrapers (over 40 yards)
- Screed
- Shovels, Backhoes, Excavators with all attachments (over 3 yards)
- Sidebooms (over 45 tons)
- Slip Form Paver, C.M.I. & similar types

A1603 Group II, including:	39.51	9.80	12.25	1.00	L&M		0.10	62.66
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- Boiler - Fireman
- Cement Hogs & Concrete Pump Operator
- Conveyors (except those listed in Group I)
- Grade Checker
- Hoists on Steel Erection, Towermobiles & Air Tuggers
- Horizontal/Directional Drill Locator
- Licensed Grade Technician
- Locomotives, Rod & Geared Engines
- Mixers
- Screening, Washing Plant
- Sideboom (cradling rock drill, regardless of size)

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Power Equipment Operators

**See note on last page if remote site

A1603 Group II, including:	39.51	9.80	12.25	1.00	0.10	L&M	62.66
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- Skidder
- Trenching Machines (under 16 inches)
- Water/Waste Water Treatment Operator

A1604 Group III, including:	38.79	9.80	12.25	1.00	0.10	L&M	61.94
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- "A" Frame Trucks, Deck Winches
- Bombardier (tack or tow rig)
- Boring Machine
- Brooms, Power (sweeper, elevator, vacuum, or similar)
- Bump Cutter
- Compressor
- Farm Tractor
- Forklift, Industrial Type
- Gin Truck or Winch Truck (with poles when used for hoisting)
- Hoists, Air Tuggers, Elevators
- Loaders:
 - (a) Elevating-Athey, Barber Greene & similar types
 - (b) Forklifts or Lumber Carrier (on construction job sites)
 - (c) Forklifts, (with tower)
 - (d) Overhead & Front End, (under 2-1/2 yards)
- Locomotives: Dinkey (air, steam, gas & electric) Speeders
- Mechanics, Light Duty
- Oil, Blower Distribution
- Posthole Digger, Mechanical
- Pot Fireman (power agitated)
- Power Plant, Turbine Operator, (under 200 k.w.)
- Pumps, Water
- Roller (other than Asphalt)
- Saws, Concrete
- Skid Hustler
- Skid Steer (with all attachments)
- Stake Hopper
- Straightening Machine
- Tow Tractor

A1605 Group IV, including:	32.58	9.80	12.25	1.00	0.10	L&M	55.73
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- Crane Assistant Engineer/Rig Oiler
- Drill Helper
- Parts & Equipment Coordinator
- Spotter

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Power Equipment Operators

**See note on last page if remote site

A1605	Group IV, including:	32.58	9.80	12.25	1.00		L&M 0.10	55.73
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- Steam Cleaner
- Swamper (on trenching machines or shovel type equipment)

Roofers

**See note on last page if remote site

A1701	Roofer & Waterproofer	44.62	11.75	2.91	0.81		L&M 0.10	60.22
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A1702	Roofer Material Handler	31.23	11.75	2.91	0.81		L&M 0.10	46.83
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Sheet Metal Workers, Region I (North of N63 latitude)

N1801	Sheet Metal Journeyman	47.74	10.80	11.25	1.45		L&M 0.12	71.36
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- Air Balancing and duct cleaning of HVAC systems
- Brazing, soldering or welding of metals
- Demolition of sheet metal HVAC systems
- Fabrication and installation of exterior wall sheathing, siding, metal roofing, flashing, decking and architectural sheet metal work
- Fabrication and installation of heating, ventilation and air conditioning ducts and equipment
- Fabrication and installation of louvers and hoods
- Fabrication and installation of sheet metal lagging
- Fabrication and installation of stainless steel commercial or industrial food service equipment
- Manufacture, fabrication assembly, installation and alteration of all ferrous and nonferrous metal work
- Metal lavatory partitions
- Preparation of drawings taken from architectural and engineering plans required for fabrication and erection of sheet metal work
- Sheet Metal shelving
- Sheet Metal venting, chimneys and breaching
- Skylight installation

Sheet Metal Workers, Region II (South of N63 latitude)

S1801	Sheet Metal Journeyman	42.00	10.80	12.61	1.43		L&M 0.40	67.24
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- Air Balancing and duct cleaning of HVAC systems

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
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Sheet Metal Workers, Region II (South of N63 latitude)

						L&M	
S1801	Sheet Metal Journeyman	42.00	10.80	12.61	1.43	0.40	67.24

- Brazing, soldering or welding of metals
- Demolition of sheet metal HVAC systems
- Fabrication and installation of exterior wall sheathing, siding, metal roofing, flashing, decking and architectural sheet metal work
- Fabrication and installation of heating, ventilation and air conditioning ducts and equipment
- Fabrication and installation of louvers and hoods
- Fabrication and installation of sheet metal lagging
- Fabrication and installation of stainless steel commercial or industrial food service equipment
- Manufacture, fabrication assembly, installation and alteration of all ferrous and nonferrous metal work
- Metal lavatory partitions
- Preparation of drawings taken from architectural and engineering plans required for fabrication and erection of sheet metal work
- Sheet Metal shelving
- Sheet Metal venting, chimneys and breaching
- Skylight installation

Sprinkler Fitters

						L&M	
A1901	Sprinkler Fitter	47.25	9.67	14.10	0.52	0.25	71.79

Surveyors

**See note on last page if remote site

						L&M	
A2001	Chief of Parties	42.81	10.58	11.89	1.15	0.10	66.53

						L&M	
A2002	Party Chief	41.22	10.58	11.89	1.15	0.10	64.94

						L&M	
A2003	Line & Grade Technician/Office Technician/GPS, Drones	40.62	10.58	11.89	1.15	0.10	64.34

						L&M	
A2004	Associate Party Chief (including Instrument Person & Head Chain Person)/Stake Hop/Grademan	38.50	10.58	11.89	1.15	0.10	62.22

						L&M	
A2006	Chain Person (for crews with more than 2 people)	34.16	10.58	11.89	1.15	0.10	57.88

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Truck Drivers

**See note on last page if remote site

A2101 Group I, including:	39.59	10.58	11.89	1.15	L&M 0.10	63.31
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- Air/Sea Traffic Controllers
- Ambulance/Fire Truck Driver (EMT certified)
- Boat Coxswain
- Captains & Pilots (air & water)
- Deltas, Commanders, Rollagons, & similar equipment (when pulling sleds, trailers or similar equipment)
- Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 40 yards up to & including 60 yards
- Helicopter Transporter
- Liquid Vac Truck/Super Vac Truck
- Lowboys (including attached trailers & jeeps up to & including 8 axles)
- Material Coordinator or Purchasing Agent
- Ready-mix (over 12 yards up to & including 15 yards) (over 15 yards to be negotiated)
- Semi with Double Box Mixer
- Tireman, Heavy Duty/Fueler
- Water Wagon (250 Bbls and above)

A2102 Group 1A including:	40.86	10.58	11.89	1.15	L&M 0.10	64.58
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- Dump Trucks (including rockbuggy, side dump, belly dump & trucks with pups) over 60 yards up to & including 100 yards (over 100 yards to be negotiated)
- Jeeps (driver under load)
- Lowboys, including tractor attached trailers & jeeps, 9 axles, up to & including 12 axles (over 12 axles or 150 tons to be negotiated)

A2103 Group II, including:	38.33	10.58	11.89	1.15	L&M 0.10	62.05
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- All Deltas, Commanders, Rollagons, & similar equipment
- Batch Trucks (8 yards & up)
- Batch Trucks (up to & including 7 yards)
- Boom Truck/Knuckle Truck (over 5 tons)
- Cacasco Truck/Heat Stress Truck
- Construction and Material Safety Technician
- Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 20 yards up to & including 40 yards
- Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating over 5 tons)
- Mechanics
- Oil Distributor Driver
- Partsman
- Ready-mix (up to & including 12 yards)

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Truck Drivers

**See note on last page if remote site

A2103 Group II, including:	38.33	10.58	11.89	1.15	0.10	L&M	62.05
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Stringing Truck
Turn-O-Wagon or DW-10 (not self loading)

A2104 Group III, including:	37.51	10.58	11.89	1.15	0.10	L&M	61.23
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Boom Truck/Knuckle Truck (up to & including 5 tons)
Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 10 yards up to & including 20 yards
Expeditor (electrical & pipefitting materials)
Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating 5 tons & under)
Greaser - Shop
Thermal Plastic Layout Technician
Traffic Control Technician
Trucks/Jeeps (push or pull)

A2105 Group IV, including:	36.93	10.58	11.89	1.15	0.10	L&M	60.65
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Air Cushion or similar type vehicle
All Terrain Vehicle
Buggymobile
Bull Lift & Fork Lift, Fork Lift with Power Boom & Swing Attachment (over 5 tons)
Bus Operator (over 30 passengers)
Cement Spreader, Dry
Combination Truck-Fuel & Grease
Compactor (when pulled by rubber tired equipment)
Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) up to & including 10 yards
Dumpster
Expeditor (general)
Fire Truck/Ambulance Driver
Flat Beds, Dual Rear Axle
Foam Distributor Truck Dual Axle
Front End Loader with Fork
Grease Truck
Hydro Seeder, Dual Axle
Hyster Operators (handling bulk aggregate)
Loadmaster (air & water operations)
Lumber Carrier
Ready-mix, (up to & including 7 yards)
Rigger (air/water/oilfield)
Semi or Truck & Trailer

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Truck Drivers
 **See note on last page if remote site

						L&M	
A2105	Group IV, including:	36.93	10.58	11.89	1.15	0.10	60.65
	Tireman, Light Duty						
	Track Truck Equipment						
	Truck Vacuum Sweeper						
	Warehouseperson						
	Water Truck (Below 250 Bbls)						
	Water Truck (straight)						
	Water Wagon, Semi						

						L&M	
A2106	Group V, including:	36.17	10.58	11.89	1.15	0.10	59.89
	Buffer Truck						
	Bull Lifts & Fork Lifts, Fork Lifts with Power Boom & Swing Attachments (up to & including 5 tons)						
	Bus Operator (up to 30 passengers)						
	Farm Type Rubber Tired Tractor (when material handling or pulling wagons on a construction project)						
	Flat Beds, Single Rear Axle						
	Foam Distributor Truck Single Axle						
	Fuel Handler (station/bulk attendant)						
	Gear/Supply Truck						
	Gravel Spreader Box Operator on Truck						
	Hydro Seeders, Single axle						
	Pickups (pilot cars & all light-duty vehicles)						
	Rigger/Swamper						
	Tack Truck						
	Team Drivers (horses, mules, & similar equipment)						

Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)
 **See note on last page if remote site

						L&M	LEG	
N2201	Group I, including:	33.29	8.70	17.06	1.25	0.20	0.20	60.70
	Brakeman							
	Mucker							
	Nipper							
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)							
	Topman & Bull Gang							
	Tunnel Track Laborer							

						L&M	LEG	
N2202	Group II, including:	34.39	8.70	17.06	1.25	0.20	0.20	61.80
	Burning & Cutting Torch							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)
 **See note on last page if remote site

						L&M	LEG	
N2202	Group II, including:	34.39	8.70	17.06	1.25	0.20	0.20	61.80
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Concrete Laborer							
	Floor Preparation, Core Drilling							
	Jackhammer/Chipping Gun or Pavement Breaker							
	Laser Instrument Operator							
	Nozzlemen, Pumpcrete or Shotcrete							
	Pipelayer Helper							

						L&M	LEG	
N2203	Group III, including:	35.38	8.70	17.06	1.25	0.20	0.20	62.79
	Miner							
	Retimberman							

						L&M	LEG	
N2204	Group IIIA, including:	38.98	8.70	17.06	1.25	0.20	0.20	66.39
	Asphalt Raker, Asphalt Belly Dump Lay Down							
	Drill Doctor (in the field)							
	Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)							
	Pioneer Drilling & Drilling Off Tugger (all type drills)							
	Pipelayer							
	Powderman (Employee Possessor)							
	Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)							

						L&M	LEG	
N2206	Group IIIB, including:	42.88	5.99	17.06	1.25	0.20	0.20	67.58
	Federal Powderman (Responsible Person in Charge)							
	Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)							
	Stake Hopper							

Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude)
 **See note on last page if remote site

						L&M	LEG	
S2201	Group I, including:	33.29	8.70	17.06	1.25	0.20	0.20	60.70
	Brakeman							
	Mucker							
	Nipper							
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)							
	Topman & Bull Gang							
	Tunnel Track Laborer							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude)
 **See note on last page if remote site

						L&M	LEG	
S2202	Group II, including:	34.39	8.70	17.06	1.25	0.20	0.20	61.80
	Burning & Cutting Torch							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Concrete Laborer							
	Floor Preparation, Core Drilling							
	Jackhammer/Chipping Gun or Pavement Breaker							
	Laser Instrument Operator							
	Nozzlemen, Pumpcrete or Shotcrete							
	Pipelayer Helper							

						L&M	LEG	
S2203	Group III, including:	35.38	8.70	17.06	1.25	0.20	0.20	62.79
	Miner							
	Retimberman							

						L&M	LEG	
S2204	Group IIIA, including:	38.98	8.70	17.06	1.25	0.20	0.20	66.39
	Asphalt Raker, Asphalt Belly Dump Lay Down							
	Drill Doctor (in the field)							
	Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)							
	Pioneer Drilling & Drilling Off Tugger (all type drills)							
	Pipelayer							
	Powderman (Employee Possessor)							
	Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)							

						L&M	LEG	
S2206	Group IIIB, including:	42.88	5.99	17.06	1.25	0.20	0.20	67.58
	Federal Powderman (Responsible Person in Charge)							
	Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)							
	Stake Hopper							

Tunnel Workers, Power Equipment Operators
 **See note on last page if remote site

						L&M		
A2207	Group I	44.31	9.80	12.25	1.00	0.10		67.46
A2208	Group IA	46.24	9.80	12.25	1.00	0.10		69.39
A2209	Group II	43.46	9.80	12.25	1.00	0.10		66.61

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Tunnel Workers, Power Equipment Operators

**See note on last page if remote site

A2210	Group III	42.67	9.80	12.25	1.00		L&M 0.10	65.82
A2211	Group IV	35.84	9.80	12.25	1.00		L&M 0.10	58.99

* A remote site is isolated and relatively distant from the amenities of civilization, and usually far from the employee's home. As a condition of employment, the workers must eat, sleep, and socialize at the worksite and remain there for extended periods.

** This classification must receive board and lodging under certain conditions. A per diem option of \$75 is an alternative to providing meals and lodging. See Page v for an explanation.

*** Work in combination of classifications: Employees working in any combination of classifications within the diving crew (working diver, standby diver, and tender) in a shift are paid in the classification with the highest rate for a minimum of 8 hours per shift.

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

SECTION 00 6100 – EMPLOYMENT SECURITY TAX CLEARANCE FORM

Employment Security Tax Clearance

Date: _____

To: Alaska Department of Labor
Juneau Field Tax Office
PH 907-465-2787
FAX 907-465-2374

From: _____

**Subject: JNU Float Pond Improvements
Contract No. BE18-053**

Timeframe of Contract _____

Please advise whether or not clearance is granted for the following Contractor or Subcontractor:
(List only one Contractor or Subcontractor per page.)

Name Address

Per AS 23.20.265 of the Alaska Employment Security Act, this request is for tax liability clearance and release to make final payment for Work performed under the subject contract. Please send your response to:

Greg Smith, Contract Administrator
Engineering Department
155 S. Seward Street
Juneau, Alaska 99801
FAX 907-586-4530

- () Tax Clearance is granted.
- () Tax Clearance is NOT granted.

Remarks: _____

Signature

Date

Title

END OF SECTION

SECTION 00 6200 – COMPLIANCE CERTIFICATE AND RELEASE FORM

COMPLIANCE CERTIFICATE AND RELEASE

PROJECT: JNU Float Pond Improvements

CONTRACT NO: BE18-053

The Contractor must complete and submit this to the Engineering Contract Administrator with respect to the entire contract.

Completed forms may be submitted upon completion of the Project. All requirements and submittals must be met before final payment will be made to the Contractor.

I certify that the following and any referenced attachments are true:

- All Work has been performed, materials supplied, and requirements met in accordance with the applicable Drawings, Specifications, and Contract Documents.
- All Suppliers and Subcontractors have been paid in full with no claims for labor, materials or other services outstanding. If all Subcontractors and suppliers are not paid in full, please explain on a separate sheet.
- All employees have been paid not less than the current prevailing wage rates set by the State of Alaska (or U.S. Department of Labor, as applicable).
- All equal employment opportunity, certified payroll and other reports have been filed in accordance with the prime contract.
- The attached list of Subcontractors is complete (required from Contractor). The Contract Administrator was advised and approved of all Subcontractors before Work was performed and has approved any substitutions of Subcontractors.
- All DBE firms listed as a precondition of the prime contract award must have performed a commercially useful function in order for the Work to count to a DBE goal. All DBE firms performed the Work stated and have received at least the amount claimed for credit in the Contract Documents.
- All DBE Subcontractors must attach a signed statement of the payment amount received, the nature of Work performed, whether any balance is outstanding, and indicate that no rebates are involved.
- If the amount paid is less than the amount originally claimed for DBE credit, the Contractor has attached approval from the Contract Administrator for underutilization.

I understand it is unlawful to misrepresent information in order to receive a payment which would otherwise be withheld if these conditions were not met. I am an authorized agent of this firm and sign this freely and voluntarily. The foregoing statements are true and apply to the following project contractor.

Firm Name Capacity: CONTRACTOR

Signed Printed Name and Title Date

Return completed form to: Engineering Contract Administrator, City and Borough of Juneau, 155 South Seward Street, Juneau, AK 99801. Call (907) 586-0873 if we can be of further assistance or if you have any questions.

END OF SECTION 00 6200

SECTION 00 7000 - GENERAL CONDITIONS OF THE CONTRACT

For the following Project: **JNU Float Pond Improvements
Juneau International Airport
Kendler Way
Juneau, Alaska 99801**

The Owner: **Juneau International Airport
City and Borough of Juneau**

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SECTION 00 7000 - GENERAL CONDITIONS OF THE CONTRACT

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General and Supplementary), drawings, specifications, addenda issued prior to execution of the Contract, other documents listed in the Agreement and modifications issued after execution of the Contract. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of addenda relating to bidding requirements).

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Architect/Engineer and Contractor, (2) between the Owner and a subcontractor (of any tier), (3) between the Owner and Architect/Engineer or (4) between any persons or entities other than the Owner and Contractor.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the project.

§ 1.1.4 THE PROJECT

The project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

§ 1.1.5 THE DRAWINGS

The drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and work quality for the Work, and performance of related services.

§ 1.1.7 THE PROJECT MANUAL

The project manual is a volume assembled for the Work that may include the bidding requirements, sample forms, Conditions of the Contract and specifications.

§ 1.1.8 OTHER DEFINITIONS

Advisory Circulars (ACs) - Informational documents produced by the Federal Aviation Administration to guide institutions, operations, and individuals within the aviation industry, as well as the general public. Advisory Circulars are intended to be informative in nature; however, they may describe actions or advice that the FAA expects to be implemented or followed.

Agreement—The written form, executed by the Contractor and Owner, legally binding the parties and covering the Work to be performed; other documents are attached to the form and made a part thereof as provided therein.

Airport Improvement Program (AIP) - A grant-in-aid program administered by the FAA.

Air operations area (AOA) - For the purpose of these specifications, the term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

SECTION 00 7000 - GENERAL CONDITIONS OF THE CONTRACT

Airport - An area of land or water that is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas.

Architect - See Article 4.

Asbestos - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

Bid - The bidder's offer or proposal submitted on the prescribed form setting forth the price or prices for the Work.

Change Order - See Article 7.

Construction Safety and Phasing Plan (CSPP) - The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.

Contract and Contract Documents - Written documents covering the Work to be performed. The awarded contract shall include, but is not limited to the documents identified in the Agreement between Owner and Contractor.

Contractor - See Article 3.

Defective Work - Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or Work that has been damaged prior to the Owner's Representative's recommendation of final payment.

Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the parties to sign and deliver.

Engineer - See Article 4.

FAA - The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or its duly authorized representative.

Federal Specifications - The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

Inspector - A representative of the Owner or Architect/Engineer assigned to make necessary inspections, observations, and/or tests of the Work performed or being performed, or of the materials furnished or being furnished by the Contractor, but without authorization to make changes or interpretations of the Work.

Milestone - A key or critical point in time for reference or measurement.

Modification - (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (2) a Construction Change Directive or (3) a written order for a minor change in the Work issued by the Owner.

Notice of Intent to Award - The written notice by the Owner to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the requirements listed therein, within the time specified, the Owner will enter into an Agreement.

SECTION 00 7000 - GENERAL CONDITIONS OF THE CONTRACT

Notice of Award - The written notice by the Owner to the apparent successful bidder stating that the apparent successful bidder has complied with all conditions for award of the Contract, and establishing the date of commencement of the Contract time.

Notice of Substantial Completion - A form signed by the Owner and the Contractor identifying that the Work is substantially complete and fixing the date of Substantial Completion.

Notice To Proceed - The written notice issued by the Owner to the Contractor authorizing the Contractor to proceed with the Work.

Orders – Guidance documents published by the FAA that outline procedures and regulatory requirements.

Owner and Owner's Representative – See Article 2.

Runway - The area on the airport prepared for the landing and takeoff of aircraft.

Sponsor - A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

Sub-Consultant - The individual, partnership, corporation, joint-venture or other legal entity having a direct contract with the Architect/Engineer, or with any of its consultants to furnish services with respect to the project.

Subcontractor - See Article 5.

Supplier - A material manufacturer, fabricator, supplier, distributor, or vendor.

Taxiway - For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

Underground Utilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: water, sewage and drainage removal, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic, or other control systems.

Using Agency - The entity that will occupy or use the completed project.

Working day - A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When Work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the specifications into divisions, sections and articles, and arrangement of drawings shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

SECTION 00 7000 - GENERAL CONDITIONS OF THE CONTRACT

§ 1.2.4 If any portion of the Contract Documents is in conflict with any other portion, the various documents comprising the Contract Documents shall govern in the following order of precedence:

- Permits from other agencies as may be required by law, excepting the definition of "permittee" in these permits.
- Modifications
- The Owner-Contractor Agreement;
- Addenda;
- Section 008000 – Supplementary General Conditions;
- Section 007000 – General Conditions of the Contract for Construction;
- Specifications – Embodying all other sections of the project manual;
- Drawings: as between schedules and information given on drawings, the schedules shall govern; as between written dimensions given on drawings and scaled measurements, the written dimensions shall govern; as between large-scale drawings and small-scale drawings, the larger scale shall govern;
- Performance Bond, Labor and Material Payment Bond.

All such conflicts shall be reported, in writing to the Owner's Representative. Schedules, lists, indexes, tables, inventories, written instruction, written descriptions, summaries, statements, classifications, specifications, written selections or written designations, although appearing on the drawings, are deemed to be and are specifications as defined by this section. The principles as set forth herein shall not alter the provisions of Section 1.2.1.

In the event there is a conflict between or among any provisions within one of the component parts of the Contract Documents, the higher standard or more stringent requirement shall govern.

§ 1.2.5 Any material or operation specified by reference to published specifications of a manufacturer, published Advisory Circulars, a society, an association, a code or other published standard shall comply with requirements of the listed document and project specifications; as between referenced documents, the more stringent code or performance requirements shall govern. The Contractor, if requested, shall furnish an affidavit from the manufacturer certifying that the materials or products delivered to the Project meet the requirement specified.

§ 1.3 CAPITALIZATION

§ 1.3.1 Terms written with title capitalization in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents.

§ 1.4 INTERPRETATION

§ 1.4.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 EXECUTION OF CONTRACT DOCUMENTS

§ 1.5.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 1.6 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND CONTRACT DOCUMENTS

§ 1.6.1 Neither the Contractor, nor any subcontractor or supplier, nor any other person or organization performing any of the Work under a contract with the Owner shall have or acquire any title to or ownership rights in any of the drawings, technical specifications, or other documents used on the Work, and they shall not reuse any of them on the extensions of the project or any other project without written consent of the Owner.

§ 1.7 FEDERAL CONTRACT PROVISIONS

§ 1.7.1 The Contractor shall comply with and shall incorporate into all subcontracts all applicable federal contract provisions identified in the Supplementary General Conditions throughout the bidding, award, and performance of this Contract.

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ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the City and Borough of Juneau, acting through its legally constituted officials, officers, or employees and is referred to throughout the Contract Documents as if singular in number. For purposes of this project, the Owner shall be the Juneau International Airport who, through its Manager, shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. This person shall be titled the Owner's Representative and referred to in the Contract Documents as Owner or Owner's Representative.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Except for permits and fees, including those required under Section 3.7 that are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.2 Owner shall apply for, and obtain, a building permit for this project and shall pay for any inspection or review fees imposed by jurisdictional authorities under the building permit. In addition, the Owner shall utilize and pay for the services of an inspector for Work requiring "special inspections" as designated by the building permit.

§ 2.2.3 Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness. Any other information or services relevant to the Contractor's performance of the Work under the Owner's control shall be furnished by the Owner after receipt from the Contractor of a written request for such information or services.

§ 2.2.4 Unless otherwise provided in the Contract Documents, the Owner shall furnish the Contractor, free of charge, six 11"x17" sets of conformed drawings, and six copies of the conformed project manual.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

§ 2.3.1 If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

§ 2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such seven-day period give the Contractor a second written notice to correct such deficiencies within a three-day period. If the Contractor within such three-day period after receipt of such second notice fails to commence and continue to correct any deficiencies, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

§ 2.5 OWNER'S RIGHT TO INSPECT RECORDS

§ 2.5.1 The Owner, or any of its duly authorized representatives, shall have the right to examine all project records and documents, including without limitation, all books, correspondence, reports, analyses, instructions, drawings, receipts, vouchers, memoranda, and all financial and accounting books, records, and data, including those related to cost or pricing for this Contract, all related Change Orders and Contract modifications, and all other documents of the Contractor and any tier Subcontractors that are directly pertinent to this specific Contract for the purpose of making an audit, examination, reproduction, excerpts, or transcriptions. All required records, as further described in

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Section 13.8, shall be retained by the Contractor and its Subcontractors after the Owner makes final payments and all other pending matters are closed.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative as identified in writing by the Contractor.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect/Engineer or the Owner's Representative in the administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Before starting each portion of the Work, the Contractor shall carefully study and compare the various drawings and other Contract Documents relative to that portion of the Work, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly to Owner as a request for information in such form as the Owner.

§ 3.2.2 Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Owner, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly to the Owner. This does not release the Contractor from the obligation to perform Work in conformance with all provisions of federal, state, and local laws and regulations.

§ 3.2.3 If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Owner in response to the Contractor's notices or requests for information pursuant to Sections 3.2.1 and 3.2.2, the Contractor shall make Claims as provided in Sections 4.3. If the Contractor fails to perform the obligations of Sections 3.2.1 and 3.2.2, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. The Contractor shall not be liable to the Owner or Architect/Engineer for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents unless the Contractor recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Owner.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using its best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and shall not proceed with that portion of the Work without further written instructions from the Owner. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage.

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§ 3.3.2 The Contractor shall control its operations and the operations of its subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

- .1 When the Work requires the Contractor to conduct its operations within an AOA of the airport, the Work shall be coordinated with designated airport operations personnel (through the Owner) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Owner and until the necessary temporary marking and associated lighting is in place.
- .2 When the Work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until the satisfactory conditions are provided.

§ 3.3.3 The Contractor shall conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction

- .1 All of the Contractor's operations shall be conducted in accordance with the project Construction Safety and Phasing Plan (CSPP) and the provisions set forth within the current version of AC 150/5370-2. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a Safety Plan Compliance Document that details how it proposes to comply with the requirements presented within the CSPP.
- .2 The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.
- .3 The Contractor is responsible for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and that they implement and maintain all necessary measures.
- .4 No deviation or modifications may be made to the approved CSPP unless approved in writing by the Owner.

§ 3.3.4 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, all tiers of Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

§ 3.3.5 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.3.6 The Contractor shall maintain the Work during construction and until the Work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the Work is maintained in satisfactory condition at all times. In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations. All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items or within the lump sum, and the Contractor will not be paid an additional amount for such work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Owner and in accordance with a Change Order.

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§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. Any person employed by the Contractor or by any subcontractor who, in the opinion of the Owner, does not perform the Work in a proper and skillful manner, or is intemperate or disorderly shall, at the written request of the Owner be removed forthwith by the Contractor or Subcontractor employing such person, and shall not be employed again in any portion of the Work without the approval of the Owner. Should the Contractor fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the Work, the Owner may suspend the Work by written notice until such orders are complied with.

§ 3.5 WARRANTY

§ 3.5.1 The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

§ 3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES AND NOTICES

§ 3.7.1 Except as provided under Article 2.2, and unless otherwise provided in the Contract Documents, the Contractor shall cooperate with the Owner who will apply for, obtain, and pay for necessary building permits. The Contractor shall schedule and coordinate all necessary inspections and obtain all required certificates required by the building permit, even when such building permit is obtained by the Owner.

§ 3.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work. Prior to commencement of construction activities the Contractor shall post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

§ 3.7.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Owner in writing, and necessary changes shall be accomplished by appropriate modification.

§ 3.7.4 If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.5 Certified Payrolls. Any Contractor or Subcontractor who performs Work on a public construction Contract for the Owner shall file a certified payroll with the Alaska Department of Labor before the second Friday of every two weeks that covers the preceding two weeks. (Section 14-2-4 ACLA 1949; am Section 4 ch 142 SLA 1972).

- .1 In lieu of submitting the State payroll form, the Contractor's standard payroll form may be submitted, provided it contains the information required by AS 36.05.040 and a statement that the Contractor is complying with AS 36.10.010.

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- .2 A Contractor or Subcontractor who performs Work on public construction in the State, as defined by AS 36.95.010(3), shall pay not less than the current prevailing rate of wages as issued by the Alaska Department of Labor before the end of the pay period. (AS 36.05.010).

§ 3.7.6 Prevailing Wage Rates. Wage rates for Laborers and Mechanics on Public Contracts, AS 36.05.070. The Contractor, or Subcontractors, shall pay all employees unconditionally and not less than once a week. Wages may not be less than those stated in Section 3.7.5.2, regardless of the contractual relationship between the Contractor or Subcontractors and laborers, mechanics, or field surveyors. The scale of wages to be paid shall be posted by the Contractor in a prominent, easily accessible place at the site of the Work.

- .1 Failure to Pay Agreed Wages, AS 36.05.080. If it is found that a laborer, mechanic, or field surveyor employed by the Contractor or Subcontractor has been, or is being, paid a rate or wages less than the established rate, the Owner may, by written notice, terminate the Contractor's or Subcontractor's right to proceed with the Work. The Owner may prosecute the Work to completion by contract or otherwise, and the Contractor and sureties will be held liable to the Owner for excess costs for completing the Work. (Section 2 ch 52 SLA 1959).
- .2 Listing Contractors Who Violate Contracts, AS 36.05.090. In addition, a list giving the names of persons who have disregarded the rights of their employees shall be distributed to all departments of State government and all political subdivisions. No person appearing on this list, and no firm, corporation, partnership or association in which the person has an interest, may work as a Contractor or Subcontractor on a public construction Contract for the State, or a political subdivision of the State, until three years after the date of publication of the list. (Section 3 ch 52 SLA 1959; am Section 9 ch 142 SLA).

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the contract sum all allowances stated in the Contract Documents, if any. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the contract sum but not in the allowances;
- .3 whenever costs are more than or less than allowances, the contract sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner in sufficient time to avoid delay in the Work.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Superintendent must have negotiating authority for contract modifications.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at intervals as required by the Contract Documents, shall be related to the entire project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

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§ 3.10.2 The Contractor shall prepare and keep current, for the Owner's approval, a schedule of submittals that is coordinated with the Contractor's construction schedule and allows the Architect/Engineer and Owner reasonable time to review submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

§ 3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the drawings, specifications, addenda, Change Orders and other modifications, in good order and marked currently to record field changes and selections made during construction, and one record copy of approved shop drawings, product data, samples and similar required submittals. These shall be made available to the Owner at any time and shall be updated and submitted to the Owner as required by the Contract Documents.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a subcontractor of any tier, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples which illustrate materials, equipment or work quality and establish standards by which the Work will be judged.

§ 3.12.4 Shop drawings, product data, samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way that the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Architect/Engineer is subject to the limitations of Section 4.2.11. Informational submittals upon which the Architect/Engineer and Owner are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the A/E or Owner without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Owner shop drawings, product data, samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals that are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer or Owner without action.

§ 3.12.6 By approving and submitting shop drawings, product data, samples and similar submittals, the Contractor represents that it has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of shop drawings, product data, samples or similar submittals until the respective submittal has been approved by the Owner.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Owner's approval of shop drawings, product data, samples or similar submittals unless the Contractor has specifically informed the Owner in writing of such deviation at the time of submittal and (1) the Owner has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in shop drawings, product data, samples or similar submittals by the Owner's approval thereof.

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§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted shop drawings, product data, samples or similar submittals, to revisions other than those requested by the Owner on previous submittals. In the absence of such written notice the Owner's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall provide professional services that constitute the practice of architecture, engineering, or land surveying where such services are specifically required by the Contract Documents for a portion of the Work or where the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect/Engineer will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, shop drawings and other submittals prepared by such professional. Shop drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Owner. The Owner and the A/E shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided the Owner and A/E have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this section, the A/E will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

§ 3.13 USE OF SITE

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. Activities not related to the execution of the Work, unless specifically permitted by the Owner, are prohibited.

§ 3.13.2 It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.

- .1 The Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to its own operations and the operations of all subcontractors as specified in Article 3 Section 3.3. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in applicable sections of the contract documents.
- .2 The Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.
- .3 When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices at mutcd.fhwa.dot.gov, unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

§ 3.13.3 The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work until their removal is directed by the Owner. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated. Unless otherwise specified, barricades, warning signs, and markings for hazards that are in the air operations area (AOAs) shall be a maximum of 18 inches high. Unless otherwise specified, barricades shall be spaced not more than 4 feet apart.

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For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices.

When the Work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of advisory circular (AC) 150/5340-1, Standards for Airport Markings.

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and the Contractor's parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2, Operational Safety on Airports During Construction.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

§ 3.16 ACCESS TO WORK

§ 3.16.1 The Contractor shall provide the Owner and Architect/Engineer access to the Work in preparation and progress wherever located. The Contractor shall provide safe facilities for such access so the Owner and A/E may perform their functions under the Contract Documents.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

§ 3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect/Engineer harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in drawings, specifications or other documents prepared by the Owner or A/E. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Owner.

§ 3.18 INDEMNIFICATION

To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify, defend, and hold harmless the Owner, its Architect/Engineer (A/E), consultants, subconsultants and the officers, directors, employees, and agents of each and either of them, against and from all claims and liability arising under, by reason of or incidentally to the contract or any performance of the Work or any performance of the Work by subcontractors, their agents, and their employees, but not from the sole negligence or willful misconduct of the Owner and/or its A/E. Such

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indemnification by the Contractor and its subcontractors, their agents, and their employees shall include but not be limited to the following:

- .1 Liability or claims resulting directly or indirectly from the negligence or carelessness in the performance of the Work, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission;
- .2 Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the Contractor's or subcontractor's own employees engaged in the Work resulting in actions brought by or on behalf of such employees against the Owner and/or the A/E;
- .3 Liability or claims arising directly or indirectly from or based on the violation of any law, ordinance, regulation, order, or decree;
- .4 Liability or claims arising directly or indirectly from the use or manufacture of any copyrighted or non-copyrighted composition, secret process, patented or non-patented invention, computer software, article, or appliance, unless otherwise specifically stipulated in this contract;
- .5 Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the Owner, its A/E, its consultants, subconsultants and the officers, directors, employees, and agents, or any other parties;
- .6 Liabilities or claims arising directly or indirectly from willful or criminal misconduct; and,
- .7 Liabilities or claims arising directly or indirectly from any breach of the obligations assumed herein by the Contractor.

§ 3.18.2 The Contractor shall reimburse the Owner for all costs and expenses, (including but not limited to fees and charges of Architect/Engineer, attorneys, and other professionals and court costs including all costs of appeals) incurred by the Owner in enforcing the provisions of this section.

§ 3.18.3 The indemnification obligation under this section shall not be limited in any way by any limitation of the amount or type of damages, compensation, or benefits payable by or for the Contractor or any such subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

§ 4.1 OWNER'S REPRESENTATIVE, AND ARCHITECT/ENGINEER

§ 4.1.1 The Owner's Representative will be the Owner's agent to the Contractor with respect to the project during construction and until the issuance of the final Certificate for Payment. The Owner's communications with the Contractor will be through the Owner's Representative, who will have full authority to act on behalf of the Owner with regard to all aspects of the construction of the project.

§ 4.1.2 Nothing contained within the Contract Documents shall create any contractual relationship between the Owner's Representative and the Contractor.

§ 4.1.3 Architect or Engineer

- .1 For purposes of this contract, the Architect or Engineer (A/E) is the person performing services on behalf of the Owner, and lawfully licensed to practice architecture or engineering, or an entity lawfully practicing architecture or engineering identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number.
- .2 For purposes of the Contract Documents, references to the Architect may include sub consultants of multiple tiers who are lawfully licensed to practice disciplines included in the Work including, but not limited to civil, structural, mechanical, and electrical engineering. Similarly, references to the Engineer may include sub consultants of multiple tiers who are lawfully licensed to practice disciplines included in the Work including, but not limited to architecture, civil, structural, mechanical, and electrical engineering.
- .3 Nothing contained within the Contract Documents shall create any contractual relationship between the A/E and the Contractor.

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§ 4.2 OWNER'S REPRESENTATIVE'S ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Owner's Representative will provide administration of the Contract as described in the Contract Documents, and will be the Owner's agent (1) during construction, (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Section 12.2. The Owner's Representative will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 4.2.2 The office of the Owner's Representative will be located at or near the project site for the duration of construction. The Owner's Representative and associated staff will observe the Work (1) to monitor the progress and quality of the Work, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, (3) to determine in general if the Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents, and (4) to keep the Owner informed about the progress and quality of the Work. However, the Owner's Representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner's Representative will neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.

§ 4.2.3 The Owner's Representative will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Owner's Representative will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors of any tier, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner, Architect/Engineer, and Contractor shall communicate with each other through the Owner's Representative about matters arising out of, or relating to the Contract. Communications by and with the A/E's consultants shall be through the A/E. Communications by and with subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 4.2.5 Upon presentation of the Contractor's Applications for Payment, the Owner's Representative will review and certify the amounts due the Contractor and will approve the Applications for Payment in such amounts.

§ 4.2.6 The Owner's Representative will have authority to reject Work that does not conform to the Contract Documents. Whenever the Owner's Representative considers it necessary or advisable, the Owner's Representative will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Owner's Representative nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Owner's Representative to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Owner's Representative will prepare Change Orders and Construction Change Directives and may authorize minor changes in the Work as provided in Section 7.4.

§ 4.2.8 The Owner's Representative will conduct inspections to determine the date or dates of Substantial Completion and the date of Final Completion, will receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor, and will approve the final Application for Payment upon compliance with the requirements of the Contract Documents.

§ 4.2.9 The Owner's Representative will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of the Owner or Contractor. The Owner's Representative's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Owner's Representative shall be furnished in compliance with this Section 4.2, then delay shall not be

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recognized on account of failure by the Owner's Representative to furnish such interpretations until 15 days after written request is made for them.

§ 4.2.10 Interpretations and decisions of the Owner's Representative will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Owner's Representative will endeavor to secure faithful performance by both Owner and Contractor.

§ 4.2.11 SERVICES OF THE ARCHITECT OR ENGINEER (A/E)

- .1 The Architect or Engineer (A/E) will provide certain contract administration services as hereinafter described.
- .2 Should errors, omissions, or conflicts in the drawings, specifications, or other contract documents provided by the A/E be discovered, the A/E will prepare such amendments or supplementary documents and provide consultation as may be required.
- .3 The A/E and its sub-consultants will visit the site at intervals appropriate to the stage of construction to familiarize themselves generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. Unless otherwise provided in the Owner-A/E Agreement, the A/E and its sub-consultants will not be required to make exhaustive or continuous on-site inspection or observations to check the quality or quantity of the Work, but they shall make as many on-site inspections and observations as may reasonably be required to fulfill their obligations to the Owner. On the basis of such on-site observation, the A/E and its sub-consultants shall endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor.
- .4 The A/E will render written field reports to the Owner in the form required by the Owner relating to the periodic visits and inspections of the Project required by Section 4.2.11.
- .5 The A/E will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and the A/E will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The A/E will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.
- .6 The A/E shall at all times have access to the Work wherever it is in preparation or progress. The Contractor shall provide safe facilities for such access so the A/E may perform its functions under the Contract Documents.
- .7 As required, the A/E will render to the Owner interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon.
- .8 All communications, correspondence, submittals, and documents exchanged between the A/E and the Contractor in connection with the Project shall be through or in the manner prescribed by the Owner.
- .9 All interpretations and decisions of the A/E will be consistent with the intent of and reasonably inferable from the Contract Documents.
- .10 The A/E's decision in matters relating to aesthetic effect will be final if consistent with the intent of the Contract Documents and approved by the Owner.
- .11 If the A/E observes any Work that does not conform to the Contract Documents, the A/E shall promptly report in writing this observation to the Owner. The A/E will prepare and submit to the Owner lists of the Contractor's Work that is not in conformance with the Contract Documents.
- .12 The A/E will review and make a recommendation to the Owner of appropriate action upon the Contractor's submittals such as shop drawings, product data and samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The A/E's review will be taken with such reasonable promptness as to cause no delay in the Work or in the activities of the Owner, Contractor, or separate contractors, while allowing sufficient time in the A/E's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as

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required by the Contract Documents. The A/E's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The A/E's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the A/E, of any construction means, methods, techniques, sequences or procedures. The A/E's recommendation for approval of a specific item shall not indicate recommendation of approval of an assembly of which the item is a component.

- .13 The Owner will establish procedures to be followed by the A/E for review and processing of all shop drawings, catalog submittals, project reports, test reports, maintenance manuals, and other necessary documentation.
- .14 The A/E may assist the Owner in conducting inspections to determine the dates of Substantial Completion and Final Completion, and the Owner will issue a Certificate of Substantial Completion and a Certificate of Final Completion.
- .15 In case of the termination of the A/E, the Owner may appoint an alternate person who is appropriately licensed to assume all of the services of the A/E thereafter.
- .16 If the Owner and A/E agree, the A/E may provide one or more project representatives to assist in carrying out the A/E's responsibilities at the site. Such responsibilities may include, but are not limited to inspection, testing, and specialized construction observation. The assistant project representative, inspector, or other such assigned personnel shall have no authority to interpret or direct the Work unless authorized in writing by the Owner.

§ 4.3 CLAIMS AND DISPUTES

§ 4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes all other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. All Claims must be initiated by written notice within the time limits provided in Section 4.3.2. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 4.3.2 Time Limits on Claims. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes, or should reasonably have recognized, the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Owner and the other party.

§ 4.3.3 Continuing Contract Performance. Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7. and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 4.3.4 Claims for Concealed or Unknown Conditions. If conditions are encountered at the site that are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than the time limits provided in 4.3.2. The Owner will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the contract sum or contract time, or both. If the Owner determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Owner shall so notify the Contractor in writing, stating the reasons, and the Claim shall be denied.

§ 4.3.5 Claims for Additional Cost. If the Contractor wishes to make Claim for an increase in the contract sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

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§ 4.3.6 If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Owner, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Owner, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Section .

§ 4.3.7 Claims for Additional Time

- .1 If the Contractor wishes to make Claim for an increase in the contract time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.
- .2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction. The Contractor shall, within 10 days of the beginning of any such delay, notify the Owner in writing of the cause of delay and request an extension of contract time. The Owner will ascertain the facts and the extent of the delay and extend the time for completing the Work when, in the Owner's judgment, the findings of fact justify such an extension. Unprecedented, abnormal, or unusually severe weather will be defined as an event, or events, with a greater than 50-year recurrence interval, as determined by the National Weather Service.

§ 4.3.8 Injury or Damage to Person or Property. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 14 days after discovery or when discovery reasonably should have been made. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 4.3.9 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 4.3.10 Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business or reputation, attorney's fees and costs, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this section shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 4.4 RESOLUTION OF CLAIMS AND DISPUTES

§ 4.4.1 Decision of Owner. All Claims of this Contract shall be promptly brought to the Owner's Representative for analysis and consideration. The Contractor shall strictly follow the process outlined by the Owner for resolving claims and disputes, and shall not initiate or respond to alternative resolution processes, unless agreed to by both the Owner and the Contractor and incorporated into a Change Order. Once the Contractor has delivered a Claim, the Owner shall promptly analyze the Claim, fairly considering all aspects of the Claim in terms of the Contract Documents. The Owner shall then render an opinion in writing. The Owner will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 4.4.2 The Owner's Representative will review Claims and within fifteen days of the receipt of the Claim and take one or more of the following actions: (1) request additional supporting data from the Contractor or a response with

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supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, or (4) suggest a compromise.

§ 4.4.3 In evaluating Claims, the Owner may, but shall not be obligated to, consult with or seek information from either party, from the Architect/Engineer or from persons with special knowledge or expertise who may assist the Owner in rendering a decision. The Owner may authorize retention of such persons at the Owner's expense.

§ 4.4.4 If the Owner requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within fifteen days after receipt of such request, and shall either provide a response on the requested supporting data, advise the Owner when the response or supporting data will be furnished or advise the Owner that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Owner will either reject or approve the Claim in whole or in part.

§ 4.4.5 The Owner will approve or reject Claims by written decision that shall state the reasons therefor and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Owner shall be final and binding on the parties.

§ 4.4.6 Upon receipt of a Claim against the Contractor or at any time thereafter, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 4.5 DISPUTE RESOLUTION BOARD

§ 4.5.1 If provided in Supplementary General Conditions, this contract shall be subject to Dispute Resolution Board procedures in accordance with the terms and conditions stated in the Supplementary General Conditions.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "subcontractor" is referred to throughout the Contract Documents as if singular in number and means a subcontractor or an authorized representative of the subcontractor at any tier. The term "subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 As stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Owner will promptly reply to the Contractor in writing stating whether or not the Owner, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner to reply promptly shall constitute notice of no reasonable objection. Periodic submittals of the list of Subcontractors to the Owner are required. A final list of subcontractors and subcontract amounts will be required prior to Final Payment.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the contract sum and contract time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute subcontractor's Work. However, no increase in the contract sum or contract time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

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§ 5.2.4 The Contractor shall not change a subcontractor, person or entity previously selected if the Owner makes reasonable objection to such substitute.

§ 5.3 SUBCONTRACTUAL RELATIONS

§ 5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each subcontractor, to the extent of the Work to be performed by the subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the subcontractor's Work, that the Contractor, by these documents, assumes toward the Owner and Architect/Engineer. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect/Engineer under the Contract Documents with respect to the Work to be performed by the subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each subcontractor to enter into similar agreements with subcontractors of all tiers. The Contractor shall make available to each proposed subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the subcontractor will be bound, and, upon written request of the subcontractor, identify to the subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed subcontractors at all tiers.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the project with the Owner's own forces, and to award separate contracts in connection with other portions of the project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation.

§ 6.1.2 The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA facility, or a utility service of another government agency at any time during the progress of the Work.

Should the Owner of public or private utility service, FAA, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the Work, the Contractor shall cooperate with such Owners by arranging and performing the Work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such Work by others is listed above. When ordered as extra Work by the Owner, the Contractor shall make all necessary repairs to the Work that are due to such authorized Work by others, unless otherwise provided for in the contract. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized Work by others or for any delay to the Work resulting from such authorized Work.

§ 6.1.3 When separate contracts are awarded for different portions of the project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

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§ 6.1.4 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.5 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Owner apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner that are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work or defective construction of a separate contractor.

§ 6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

§ 6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Without invalidating the Contract and without notice to any surety, the Owner may at any time or from time to time, order additions, deletions, or revisions in the Work; these will be authorized by a written Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement between the Owner and the Contractor; a Construction Change Directive may be issued by the Owner and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Owner.

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

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§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Owner and signed by the Owner and Contractor, stating their agreement upon all of the following:

- .1 change in the Work;
- .2 the amount of the adjustment in the contract sum including unit price quantities; and
- .3 the extent of the adjustment, if any, in the contract time.

§ 7.2.2 Methods used in determining adjustments to the contract sum may include those listed in Section 7.3.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Owner directing a change in the Work prior to agreement on adjustment, if any, in the contract sum or contract time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the contract sum and contract time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 application of adjusted unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 as provided in Section 7.3.6.

§ 7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the contract sum or contract time.

§ 7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in contract sum and contract time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.6 If prior to the commencement of the Work the Contractor has not provided a lump sum price, or the Contractor and the Owner have not agreed on a lump sum price as described in Section 7.3.3, the price shall be established in one of the following ways, as determined by the Owner.

- .1 on a lump sum basis following completion of the Work. The lump sum price shall be properly itemized in accordance with Sections 7.3.7 and 7.3.8 and supported by sufficient data to permit evaluation;
- .2 on a time and material basis, with or without a maximum not-to-exceed price, at the discretion of the Owner. Costs will be accumulated on a time and material basis as described in Sections 7.3.7 and 7.3.9 and presented daily (the day after the Work is performed) for approval by the Owner on the forms provided by the Owner. The daily report will be signed by the Contractor and the Owner.

§ 7.3.7 Cost substantiation for Work proceeding on a lump sum or time and material basis. In accordance with Section 7.3.6, the Contractor shall provide a detailed breakdown of the costs as described in this section and submit the costs and substantiating data in a proposal to the Owner:

- .1 Excluded Costs. The following shall not be considered by the Owner for compensation to the Contractor:
 - A. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnership and sole proprietorships), general managers, architects, estimators, attorneys,

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- auditors, accountants, purchasing and contracting agents, expenditures, 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, or not specifically covered by this section, all of which are to be considered administrative costs covered by the Contractor's fee.
- B. Expenses of Contractor's principal and branch offices other than Contractor's office at the site.
 - C. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - D. 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 this section).
 - E. 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.
 - F. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in this section.
- .2 Direct costs. These shall be limited to 1) cost of materials, as described below under "Materials," 2) cost of labor as described below under "Labor Rates," 3) rental rate including fuel and maintenance for any power tools valued at over \$3,000 and equipment as described below under "Equipment Rates," and 4) bond premiums and additional cost of Builder's Risk Insurance, at rates equal to the amount billed for the base contract or the actual rate as supported by an invoice.
- .3 Equipment Rates. The Contractor will be paid for the use of equipment at the rental rates listed for such equipment in the "Rental Rate Blue Book". Such rental rate will be used to compute payments for equipment whether the equipment is under the Contractor's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate resulting in the least total cost to the Owner for the total period of use. If it is deemed necessary by the Contractor to use equipment not listed in the "Rental Rate Blue Book", an equitable rental rate for the equipment will be established by the Owner. The Contractor may furnish cost data which might assist the Owner in the establishment of the rental rate.
- A. All equipment shall, in the opinion of the Owner, be in good working condition and suitable for the purpose for which the equipment is to be used.
 - B. Before construction equipment is used on the extra Work, the Contractor shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the Owner a description of the equipment and its identifying number.
 - C. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment that has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.
 - D. Individual pieces of equipment or tools having a replacement value of \$200 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor.
 - E. Rental time will not be allowed while equipment is inoperative due to breakdowns.
 - F. Unless otherwise agreed to in writing, the Contractor will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of "Rental Rate Blue Book" available at www3.equipmentwatch.com or contact Equipment Watch at (800) 669-3282. Rental rates for equipment not covered under this reference shall be comparable to the lowest, commercially available rental rate for similar equipment in the area of the Project
- .4 Equipment on the Project site. The rental time to be paid for equipment on the Work site shall be the time the equipment is in productive operation on the extra Work being performed and, in addition, shall include the time required to move the equipment to the location of the extra Work and return it to the original location or to another location requiring no more time than that required to return it to its original location; except, that moving time will not be paid if the equipment is used on other than the extra Work, even though located at the site of the extra Work. Loading and transporting costs will

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be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made for loading and transporting costs when the equipment is used at the site of the extra Work on other than the extra Work. The following shall be used in computing the rental time of equipment on the Work site.

- A. When hourly rates are listed, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation.
 - B. When daily rates are listed, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation.
 - C. When Owner-operated equipment is used to perform extra Work to be paid for on a time and materials basis, the Contractor will be paid for the equipment and operator, set forth as follows:
 - i. Payment for the equipment will be made in accordance with the provisions in Section 7.3.
 - ii. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the Contractor to other workers operating similar equipment already on the Work site, or in the absence of such labor, established by collective bargaining agreements for the type of worker and location of the extra Work, whether or not the operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein in accordance with the provisions of Section 7.3.7.5, herein, which surcharge shall constitute full compensation for payments imposed by state and federal laws and all other payments made to or on behalf of workers other than actual wages.
 - iii. To the direct cost of equipment rental and labor, computed as provided herein, will be added the allowances for equipment rental and labor as provided in Sections 7.3.8 and 7.3.9.
- .5 Labor Rates.** The costs of labor will be the actual cost for wages prevailing for each craft or type of workers performing the extra Work at the time the extra Work is done, plus employer payments of payroll taxes, workers' compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. Labor costs for equipment operators and helpers shall be paid only when such costs are not included in the invoice for equipment rental. The labor costs for forepersons shall be proportioned to all of their assigned Work and only that applicable to extra Work shall be paid. Non-direct labor costs including superintendence shall be considered part of the mark-up set out in Sections 7.3.8 and 7.3.9.
- .6 Materials.** The cost of materials reported shall be at invoice or lowest current price at which materials are locally available and delivered to the job in the quantities involved, plus the cost of freight, delivery and storage, subject to the following:
- A. Trade discounts available to the purchaser shall be credited to the Owner notwithstanding the fact that such discounts may not have been taken by the Contractor.
 - B. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the Owner. Mark-up except for actual costs incurred in the handling of such materials will not be allowed.
 - C. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra Work items or the current wholesale price for such materials delivered to the Work site, whichever price is lower.
 - D. If in the opinion of the Owner the cost of material is excessive, or the Contractor does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the Work site less trade discount. The Owner reserves the right to furnish materials for the extra Work and no claim shall be allowed by the Contractor for costs and profit on such materials.

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- .7 Specialty Work. Specialty Work is defined as that Work characterized by extraordinary complexity, sophistication, or innovation or a combination of the foregoing attributes which are unique to the construction industry. The following shall apply in making estimates for payment for specialty Work:
 - A. Any bid item of Work to be classified as Specialty Work shall be listed as such in the Supplementary General Conditions. Specialty Work shall be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by the Owner, invoices for Specialty Work based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs.
 - B. When the Contractor is required to perform Work necessitating special fabrication or machining process in a fabrication or a machine shop facility away from the job site, the charges for that portion of the Work performed at the off-site facility may, by agreement, be accepted as Specialty Work and accordingly, the invoices for the Work may be accepted without detailed itemization.
 - C. All invoices for specialty Work will be adjusted by deducting all trade discounts offered or available, whether the discounts were taken or not. In lieu of the allowances for overhead and profit specified in Sections 7.3.8 and 7.3.9, herein, an allowance of 5 percent will be added to invoices for specialty Work.
- .8 Sureties. All Work performed hereunder shall be subject to all of the provisions of the Contract Documents and the Contractor's sureties shall be bound with reference thereto as under the original Agreement. Copies of all amendments to surety Bonds or supplemental surety Bonds shall be submitted to the Owner for review prior to the performance of any Work hereunder.

§ 7.3.8 Contractor's Fee for Work proceeding on a lump sum basis. The Contractor shall apply a combined percentage rate to the direct costs to compensate the Contractor for additional overhead and profit associated with a Change in the Work. The combined rate to the Owner of any change shall not exceed the rates set forth in the following schedule:

- .1 For the Contractor, for Work performed by the Contractor's own forces, up to fifteen percent (15%) of direct costs.
- .2 For each subcontractor, for Work performed by the subcontractor's forces, up to fifteen percent (15%) of direct costs.
- .3 For the Contractor, for work performed by subcontractors, up to ten percent (10%) of the Subcontractors direct costs.
- .4 For the subcontractor, for Work performed by subcontractors of all tiers, up to ten percent (10%) of the sub-subcontractor's direct costs.
- .5 The total Contractor and all subcontractors' overhead and profit allowance shall not exceed twenty-five percent (25%) of direct costs.
- .6 To the sum of the costs and Contractor fees provided for in this section, one percent (1%) shall be added as compensation for bonds.

§ 7.3.9 Contractor's Fee for Work proceeding on a time and materials basis. The Contractor shall apply a combined percentage rate to the direct costs to compensate the Contractor for additional overhead and profit associated with a Change in the Work. The combined rate to the Owner of any change shall not exceed the rates set forth in the following schedule:

- .1 For the Contractor, for Work performed by the Contractor's own forces, up to ten percent (10%) of direct costs.
- .2 For each subcontractor, for Work performed by the subcontractor's forces, up to ten percent (10%) of direct costs.
- .3 For the Contractor, for work performed by subcontractors, up to five percent (5%) of the subcontractors direct costs.
- .4 For the subcontractor, for Work performed by subcontractors of all tiers, up to five percent (5%) of the sub-subcontractor's direct costs.
- .5 The total Contractor and all subcontractors' overhead and profit allowance shall not exceed twenty percent (20%) of direct costs.
- .6 To the sum of the costs and Contractor fees provided for in this section, one percent (1%) shall be added as compensation for bonds.

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§ 7.3.10 Adjustment of Quantities. The Owner is authorized to make such adjustments in the Work as may increase or decrease the originally awarded contract quantities of unit price components, provided that the aggregate of such adjustments does not change the total contract cost or the total cost of any major contract item by more than 25% (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations that do not exceed the 25% limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations in accordance with the unit price offered in the bid.

§ 7.3.11 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Owner. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.12 Pending final determination of the total cost of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in applications for payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs. For any portion of such cost that remains in dispute, the Owner will make an interim determination for purposes of monthly approval of payment for those costs. That determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a claim in accordance with Article 4.

§ 7.3.13 When the Owner and Contractor agree with the adjustments in the contract sum and contract time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

§ 7.4 MINOR CHANGES IN THE WORK

§ 7.4.1 The Owner may order minor changes in the Work not involving adjustment in the contract sum or extension of the contract time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Owner in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.1.5 The term non-working day as may be used in the Contract Documents shall mean Sunday, a recognized holiday, a day on which the Contractor is specifically required to suspend construction operations or a day on which a suspension order is in effect. The legal holidays of the City & Borough of Juneau occur on:

- .1 New Year's 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 and the following Friday in November

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.11 Christmas Day - December 25

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, Sunday and the following Monday are both legal holidays.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the contract time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by the Contract Documents or a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work to permit the timely filing of mortgages, mechanic's liens and other security interests.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the contract time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect/Engineer, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner dispute resolution, or by other causes that the Owner determines may justify delay, then the contract time shall be extended by Change Order for such reasonable time as the Owner may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Section 4.3.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 BASIS OF PAYMENT

§ 9.2.1 Prior to the Preconstruction Conference, as required by the Contract Documents, the Contractor shall submit to the Owner a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Owner may require, and in accordance with other provisions of the Contract Documents. This schedule, unless objected to by the Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment.

- .1** Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows: (a) with first pay request, 25%; (b) when 25% or more of the original contract is earned, an additional 25%; (c) when 50% or more of the original contract is earned, an additional 40%; (d) after Final Inspection, staging area clean-up and delivery of all Project Closeout materials, the final 10%.

§ 9.2.2 For Unit Price contracts, all work completed under the contract will be measured by the Owner using United States Customary Units of Measurement or the International System of Units. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

- .1** Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of

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- 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Owner.
- .2 Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
 - .3 Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.
 - .4 In computing volumes of excavation the average end area method or other acceptable methods will be used.
 - .5 The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
 - .6 The term "ton" will mean the short ton consisting of 2,000 lb avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Owner. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Owner directs.
 - .7 Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
 - .8 When requested by the Contractor and approved by the Owner in writing, material specified to be measured by the cubic yard may be weighed, and such weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Owner and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.
 - .9 Bituminous materials will be measured by the gallon or ton. When measured by volume, such volumes will be measured at 60°F or will be corrected to the volume at 60°F using ASTM D1250 for asphalts or ASTM D633 for tars.
 - .10 When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.
 - .11 Cement will be measured by the ton or hundredweight.
 - .12 Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
 - .13 The term "lump sum" when used as an item of payment will mean complete payment for the Work described in the contract. When a complete structure or structural unit (in effect, "lump sum" Work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.
 - .14 Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the Work.
 - .15 When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
 - .16 Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Scales shall be accurate within 1/2% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning Work and at such other times as requested by the Owner. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1% of the nominal rated capacity of the scale, but not less than 1 pound. The use of spring balances will not be permitted. Scales must be tested for accuracy and serviced before use at a new site. All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this

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subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

§ 9.2.3 When the estimated quantities for a specific portion of the Work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the Work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Owner. If revised dimensions result in an increase or decrease in the quantities of such Work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 On a monthly basis, the Contractor shall submit to the Owner an itemized Application for Payment for operations completed in accordance with the schedule of values. Such application shall be supported by such data substantiating the Contractor's right to payment as the Owner may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for in the Contract Documents.

- .1 As provided in Section 7.3.12, such applications may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives, or by interim determinations of the Owner, but not yet included in Change Orders.
- .2 Such applications may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.
- .3 The Contractor may be required, through other provisions of the Contract Documents, to submit additional reports or documents with the application.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, partial payment may similarly be made for materials and equipment suitably stored off the site at a location in Juneau agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 APPROVAL OF APPLICATIONS FOR PAYMENT

§ 9.4.1 The Owner will, within seven days after receipt of an acceptable Application for Payment from the Contractor, either issue approval of such amount as properly due, or notify the Contractor in writing of the reasons for withholding approval in whole or in part as provided in Section 9.5.

§ 9.4.2 The approval of an Application for Payment will constitute a representation by the Owner, based on the Owner's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Owner's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Owner. The approval of an Application for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the approval of an Application for Payment will not be a representation that the Owner has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

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§ 9.4.3 The Owner may refuse to make payment of the full amount because claims have been made against the Owner or the Using Agency on account of the Contractor's performance of the Work or Liens have been filed in connection with the Work or there are other items entitling the Owner to a credit against the amount recommended, but the Owner or the Using Agency, acting through the Owner's Representative, must give the Contractor written notice within 7 days stating the reasons for such action.

§ 9.5 DECISIONS TO WITHHOLD APPROVAL OF APPLICATIONS FOR PAYMENT

§ 9.5.1 The Owner may withhold approval of Applications for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Owner's opinion the representations required by Section 9.4.2 cannot be made. If the Owner is unable to approve payment in the amount of the Application, the Owner will notify the Contractor as provided in Section 9.4.1. If the Contractor and Owner cannot agree on a revised amount, the Owner will promptly issue an approval for the amount for which the Owner is able to make such representations. The Owner may also withhold approval of an Application for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of an approval previously issued, to such extent as may be necessary in the Owner's opinion to protect from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
or
- .7 persistent failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding approval are removed, approval will be made for amounts previously withheld.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Owner has approved an application for payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents.

§ 9.6.2 The Contractor shall promptly pay each subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such subcontractor's portion of the Work, the amount to which said subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each subcontractor, require each subcontractor to make payments to subcontractors at all tiers in a similar manner.

§ 9.6.3 The Owner will, on request, furnish to a subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner on account of portions of the Work done by such subcontractor.

§ 9.6.4 The Owner shall not have an obligation to pay or to see to the payment of money to a subcontractor except as may otherwise be required by law.

§ 9.6.5 Payment to material suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 Approval of an application for payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the contract sum, payments received by the Contractor for Work properly performed by subcontractors and suppliers shall be held by

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the Contractor for those subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

§ 9.7.1 If the Owner does not approve an application for payment or notify the Contractor that such approval will be withheld, through no fault of the Contractor, within seven days after receipt of the Contractor's application for payment, or if the Owner does not pay the Contractor within thirty days after the date established in the Contract Documents the amount approved, then the Contractor may, upon seven additional days' written notice to the Owner, stop the Work until payment of the amount owing has been received. The contract time shall be extended appropriately and the contract sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use and an official Certificate of Occupancy has been issued by the authority having jurisdiction.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof that the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Owner a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Owner will make an inspection to determine whether the Work or designated portion thereof is substantially complete. The Contractor shall allow a minimum of two working days for this inspection. If the Owner's inspection discloses any item, whether or not included on the Contractor's list that is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Owner. In such case, the Contractor shall then submit a request for another inspection by the Owner to determine Substantial Completion. In the event that a third or subsequent inspection is required, the Owner reserves the right to charge the Contractor for the cost of such inspections.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Owner will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the applicable insurer and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the

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Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Owner as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Owner.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. No portion of the Work may be opened by the Contractor for public use until ordered by the Owner in writing. Should it become necessary to open a portion of the Work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Owner, such portion of the Work is in an acceptable condition to support the intended traffic or activity. Temporary or intermittent openings for airfield traffic (aircraft and vehicles) are considered to be inherent in the work and shall not constitute either acceptance of the portion of the Work so opened or a waiver of any provision of the contract. Any damage to the portion of the Work so opened that is not attributable to traffic or activity that is permitted by the Owner shall be repaired by the Contractor at its own expense.

The Contractor shall make its own estimate of the inherent difficulties involved in completing the Work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Owner, the Architect/Engineer, and the Using Agency will promptly make such inspection and, when the Owner finds the Work acceptable under the Contract Documents and the Contract fully performed, the Owner will promptly approve the final Application for Payment stating that to the best of the Owner's knowledge, information and belief, and on the basis of the aforementioned on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents. After acceptance of the Work by the Owner, the Owner will make final payment to the Contractor of the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract Documents, including the following items:

- .1** Liquidated damages, as applicable, and described within the Agreement.
- .2** If items of Work are determined by the Owner to have been left uncompleted or uncorrected between the date of Substantial Completion and the date of Final Completion, and the Owner decides to issue a Certificate of Final Completion leaving those Work items incomplete or uncorrected, the following deduction may be made from the final payment: Two times the value of outstanding items of correction Work or Substantial Completion list items yet uncompleted or uncorrected, as applicable. The Contractor does hereby waive any and all claims to all monies withheld by the Owner to cover the value of all such uncompleted or uncorrected items.

The Owner's approval of the final Application for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project, and (6) if required by the Owner, other data establishing payment or satisfaction of

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obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Owner so confirms, the Owner shall, upon application by the Contractor and approval by the Owner 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 for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Owner prior to approval of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.

§ 9.10.6 Release Of Retainage And Other Deductions. After executing the necessary documents to initiate the lien period, and not more than 45 days thereafter (based on a 30-day lien filing period and 15-day processing time), the Owner will release to the Contractor the retainage funds withheld pursuant to the Contract, less any deductions to cover pending claims against the Owner or Using Agency pursuant to Section 9.4.3.

- .1 After filing of the necessary documents to initiate the lien period, the Contractor shall have 30 days to complete any outstanding items of correction Work remaining to be completed or corrected as listed on a final punch list made a part of the Notice of Final Completion. Upon expiration of the 45 days, referred to in Section 9.10.6, the amounts withheld pursuant to the provisions of Section 9.10.1 herein, for all remaining Work items will be returned to the Contractor; provided, that said Work has been completed or corrected to the satisfaction of the Owner within said 30 days. Otherwise, the Contractor does hereby waive any and all claims for all monies withheld by the Owner under the Contract to cover two times the value of such remaining uncompleted or uncorrected items.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

§ 10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off site, under care, custody or control of the Contractor or the Contractor's subcontractors of all tiers; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

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§ 10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

- .1 Unless otherwise specified in this subsection, the Contractor is advised that the site of the Work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior. Should the Contractor encounter, during its operations, any part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the Owner. The Owner will immediately investigate the Contractor's finding and direct the Contractor to either resume operations or to suspend operations as directed. Should the Owner 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 order.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions, performance of the Contract, and regulatory agencies, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

- .1 All Contractors' operations shall be conducted in accordance with the project Construction Safety and Phasing Plan (CSPP) and the provisions set forth within the current version of AC 150/5370-2. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a Safety Plan Compliance Document that details how it proposes to comply with the requirements presented within the CSPP.
- .2 The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures. No deviation or modifications may be made to the approved CSPP unless approved in writing by the Owner.

§ 10.2.4 When use or storage of hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. A Material Safety Data Sheet shall be requested by the Contractor from the manufacturer of any hazardous product used, and material usage shall be accomplished with strict adherence to all safety requirements and all manufacturer's warnings and application instructions listed on the Material Safety Data Sheet and on the product container label. The Contractor shall be responsible for coordinating communications on any exchange of Material Safety Data Sheets or other hazardous material information that is required to be made available to, or exchanged between, or among, employers at the site in accordance with Laws or Regulations.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a subcontractor of any tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect/Engineer or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a qualified and responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be approved by the Owner.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB),

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encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner in writing.

§ 10.3.2 The Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor will promptly reply to the Owner in writing stating whether or not the Contractor has reasonable objection to the persons or entities proposed by the Owner. If the Contractor has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor has no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. The Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up, which adjustments shall be accomplished as provided in Article 7.

§ 10.3.3 The Owner shall not be responsible under Section 10.3 for materials and substances brought to the site by the Contractor unless such materials or substances were required by the Contract Documents.

§ 10.3.4 If, without negligence on the part of the Contractor, the Contractor is held liable for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.4 ENVIRONMENTAL PROTECTION

§ 10.4.1 The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

§ 10.4.2 The Contractor shall control storm water in accordance with current Alaska Department of Environmental Conservation Construction General Permit requirements for storm water control, and as described elsewhere in the contract documents.

§ 10.5 EMERGENCIES

§ 10.5.1 In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Section 4.3 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 INSURANCE

§ 11.1.1 The Contractor shall purchase and maintain the insurance required under this section. Such insurance shall include the specific coverages set out herein and be written for not less than the limits of liability and coverages provided in the Supplementary General Conditions, or required by law, whichever are greater. All insurance shall be maintained continuously during the life of the Agreement up to the date of Final Completion and at all times thereafter when the Contractor may be correcting, removing, or replacing defective Work in accordance with Section 12.2, but the Contractor's liabilities under this Contract shall not be deemed limited in any way to the insurance coverage required. Policies shall also specify insurance provided by Contractor will be considered primary and not contributory to any other insurance available to the Owner. Failure by the Contractor to keep such insurance in effect for the time period specified shall be deemed defective Work and resolved in accordance with the Contract Documents.

§ 11.1.2 All insurance required by the Contract Documents to be purchased and maintained by the Contractor shall be obtained from insurance companies that are duly licensed or authorized in the State of Alaska to issue insurance policies for the limits and coverages so required. Such insurance companies shall have a current Best's Rating of at

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least an "A" (Excellent) general policy holder's rating and a Class VII financial size category and shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.

§ 11.1.3 The Contractor shall furnish the Owner with certificates and amendatory endorsements or copies of the applicable policy language affecting coverage required in this agreement showing the type, amount, class of operations covered, effective dates and dates of expiration of policies. At least 30 days prior to the cancellation, non-renewal or reduction in the amount of coverage, Contractor shall provide written notice to the Owner. All such insurance required herein (except for Workers' Compensation and Employer's Liability) shall name the Owner, Using Agency, their Consultants and subconsultants and their officers, directors, agents, and employees as "additional insureds" under the policies. The Contractor shall purchase and maintain the following insurance:

- .1 Workers' Compensation and Employer's Liability. This insurance shall protect the Contractor against all claims under applicable state Workers' Compensation laws. The Contractor shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a Workers' Compensation law. This policy shall include an "all states" endorsement. The Contractor shall require each Subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workers' Compensation Insurance. In case any class of employees is not protected, under the Workers' Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of its employees as are not otherwise protected. Contractor agrees to waive all rights of subrogation against the Owner for work performed under Contract.

Note: If the Work called for in the Contract Documents involves work in or on any navigable waters, the Contractor shall provide Workers' Compensation coverage which shall include coverage under the Longshore and Harbor Workers' Compensation Act, the Jones Act, and any other coverage required under Federal or State laws pertaining to workers in or on navigable waters.

- .2 Commercial General Liability. This insurance shall be written in comprehensive form and shall protect the Contractor against all claims arising from injuries to persons other than its employees or damage to property of the Owner or others arising out of any act or omission of the Contractor or its agents, employees, or Subcontractors. The policy shall contain no exclusions for any operations within the scope of this Contract.
- .3 Comprehensive Automobile Liability. This insurance shall be written in comprehensive form and shall protect the Contractor against all claims for injuries to members of the public and damage to property of others arising from the use of motor vehicles, and shall cover operation on or off the site of all motor vehicles licensed for highway use, whether they are owned, non-owned, or hired. Coverage for hired motor vehicles should include endorsement covering liability assumed under this Contract.
- .4 Subcontractor's Insurance. The Contractor shall require and verify that each of its subcontractors maintain insurance meeting all of the requirements stated herein, unless specifically exempted from a required coverage. Subcontractor insurance coverage shall be of the type and in the amounts specified in the Supplementary General Conditions or Contractor shall insure the activities of its Subcontractors under the Contractor's own policy, in like amount.
- .5 Builder's Risk. This insurance shall be of the "all risks" type and shall be written in completed value form, and shall protect the Contractor, the Owner, and the Using Agency against risks of damage to buildings, structures, and materials and equipment. The amount of such insurance shall be not less than the insurable value of the Work at completion. Builder's risk insurance shall provide for losses to be payable to the Contractor, the Owner, and the Using Agency, as their interests may appear. The policy shall contain a provision that in the event of payment for any loss under the coverage provided, the insurance company shall have no rights of recovery against the Contractor, the Owner, and the Using Agency. The Builder's Risk policy shall insure against risks of direct physical loss or damage to property from any external cause. Allowable exclusions, if any, shall be as specified in the Supplementary General Conditions.

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§ 11.2 PERFORMANCE BOND AND PAYMENT BOND

§ 11.2.1 The Contractor shall furnish performance and payment bonds, each in the amount set forth in the Supplementary General Conditions as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. These bonds shall remain in effect for twelve months after the date of final payment and until all obligations and liens under this contract have been satisfied. The Contractor shall also furnish such other Bonds as are required by the Supplementary General Conditions. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by laws or regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

§ 11.2.2 If the surety on any bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Work is located, the Contractor shall within 7 days thereafter substitute another bond and surety that must be acceptable to the Owner.

§ 11.2.3 All Bonds required by the Contract Documents to be purchased and maintained by Contractor shall be obtained from surety companies that are duly licensed or authorized in the State of Alaska to issue bonds for the limits so required. Such surety companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions. The CBJ may notify the surety of any potential default or liability.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Owner's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Owner, be uncovered for the Owner's examination and be replaced at the Contractor's expense without change in the contract time.

§ 12.1.2 If a portion of the Work has been covered that the Owner has not specifically requested to examine prior to its being covered, the Owner may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 Before or after Substantial Completion. The Contractor shall promptly correct Work rejected by the Owner or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections and compensation for the Owner's and Architect's/Engineer's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, work quality, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier. If, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of

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warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, the Owner may correct it in accordance with Section 2.4.

§ 12.2.3 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work.

§ 12.2.4 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.5 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.6 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

§ 12.2.7 Nothing contained in this section shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

§ 12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the contract sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

§ 13.1.1 The Contract shall be governed by the law of the State of Alaska. The Contractor shall observe and comply with all federal, state, and local laws, ordinances, codes, orders, and regulations which in any manner affect those engaged or employed on the Work, the materials used in the Work, or the conduct of the Work. If any discrepancy or inconsistency should be discovered in this Contract in relation to any such law, ordinance, code, order, or regulation, the Contractor shall report the same in writing to the Owner. The Contractor shall indemnify, defend, and hold harmless the Owner, the Using Agency, and their officers, agents, and employees against all claims or liability arising from violation of any such law, ordinance, code, or regulation, whether by Contractor or by its employees, Subcontractors, or third parties. Any particular law or regulation specified or referred to elsewhere in the Contract Documents shall not in any way limit the obligation of the Contractor to comply with all other provisions of federal, state, and local laws and regulations.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.3 WRITTEN NOTICE

§ 13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

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§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect/Engineer or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. The Owner shall bear costs of tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded.

§ 13.5.2 If the Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Owner will instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Owner of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Owner's and Architect's/Engineer's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.

§ 13.5.5 If the Owner is to observe tests, inspections or approvals required by the Contract Documents, the Owner will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5.7 For Airport Improvement Program (AIP) contracts, the United States Government has agreed to reimburse the Owner for some portion of the Contract costs. Such reimbursement is made from time to time upon the Owner's request to the FAA. In consideration of the United States Government's (FAA's) agreement with the Owner, the Owner has included provisions in this contract pursuant to the requirements of Title 49 of the USC and the Rules and Regulations of the FAA that pertain to the work.

As required by the USC, the contract Work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator, and is further subject to those provisions of the rules and regulations that are cited in the Contract, plans, or specifications.

No requirement of the USC, the rules and regulations implementing the USC, or this Contract shall be construed as making the Federal Government a party to the Contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

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§ 13.6 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

§ 13.6.1 As between the Owner and Contractor:

- .1** Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;
- .2** Between Substantial Completion and Final Completion. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to the date of Final Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of Final Completion; and
- .3** After Final Completion. As to acts or failures to act occurring after the relevant date of Final Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

§ 13.7 RETENTION AND INSPECTION OF RECORDS

§ 13.7.1 Record Retention and Maintenance. The Contractor shall keep and maintain in safe condition full and accurate records of all costs incurred and items billed and all other project records and documents relating to performance, communications, and correspondence in connection with the performance of the Work under this Contract, which records and documents shall be open to review, examination, reproduction or audit by the Owner or its authorized representatives during performance of the Work and until three years after final payment and all other pending matters are closed.

§ 13.7.2 Subcontractor Records. The Contractor shall make it a condition of all subcontracts of all tiers relating to the Work under this Contract that any and all subcontractors of all tiers will keep accurate records of costs incurred and items billed in connection with their Work and that such records shall be open to review, examination, reproduction or audit by the Owner or its authorized representatives during performance of the Work and until three years after final payment under the subcontract and all other pending matters are closed.

§ 13.7.3 Availability. The Contractor shall make available at its business office upon request at all reasonable times the materials described in Sections 2.5 including materials of both the Contractor and its subcontractors, for review, examination, reproduction, or audit for a period of three years after final payment under this Contract and all other pending matters are closed.

§ 13.7.4 Termination. If this Contract is completely or partially terminated, the records relating to the Work terminated shall be made available for three years after any resulting final termination settlement.

§ 13.7.5 Claims and Appeals. Records pertaining to any Claims or appeals submitted pursuant to Sections 4.3, 4.4 and 4.5 or otherwise arising from or relating to the performance of Work under this Contract shall be made available until such appeals are finally concluded. Such documents or records shall be made available to the Owner or its duly authorized representatives within thirty days of the Owner's request.

§ 13.7.6 Subcontracts. The Contractor shall include the provisions of Section 13.8 in all subcontracts so as to be binding on all subcontractors.

§ 13.7.7 Cost or Pricing Data. If the Contractor has submitted cost or pricing data in connection with the pricing of any Change Order or modification to this Contract, unless pricing was based on (1) adequate price competition, (2) established catalog or market price of commercial items sold in substantial quantities to the general public, or (3) prices set by law or regulation, the Owner shall have the right to audit all books, records, documents and other data of the Contractor, including computations and projections, related to negotiating, pricing or performing the Change Order or modification, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data.

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§ 13.8 GRATUITY AND CONFLICT OF INTEREST

§ 13.8.1 The Contractor agrees to not extend any loan, gratuity or gift of money of any form whatsoever to any employee or elected official of the City and Borough of Juneau or the Using Agency, nor will the Contractor rent or purchase any equipment or materials from any employee or elected official of the City and Borough of Juneau or the Using Agency, or to the best of the Contractor's knowledge, from any agent of any employee or elected official of the City and Borough of Juneau or the Using Agency. Before Final Payment, the Contractor shall execute and furnish the Owner an affidavit certifying that the Contractor has complied with the above provisions of the Contract.

§ 13.9 COST REDUCTION INCENTIVE

§ 13.9.1 At any time within 30 days after the date of the Notice of Award, the Contractor may submit to the Owner in writing, proposals for modifying the drawings, specifications, or other requirements of this Contract for the sole purpose of reducing the total cost of construction. The cost reduction proposal shall not impair in any manner the essential functions or characteristics of the project, including but not limited to, service life, economy of operation, ease of maintenance, desired appearance or design and safety standards.

§ 13.9.2 The cost reduction proposal shall contain the following information:

1. Description of both the existing Contract requirements for performing the Work and the proposed changes.
2. An itemization of the Contract requirements that must be changed if the proposal is adopted.
3. A detailed estimate of the time required and the cost of performing the Work under both the existing Contract and the proposed change.
4. A statement of the date by which the Contractor must receive the decision from the Owner on the cost reduction proposal.
5. The Contract items of Work affected by the proposed changes including any quantity variations.
6. A description and estimate of costs the Owner may incur in implementing the proposed changes, such as test and evaluation and operating and support costs.
7. A prediction of any effects the proposed change would have on future operations and maintenance costs to the Owner.

§ 13.9.3 The provisions of this section shall not be construed to require the Owner to consider any cost reduction proposal that may be submitted; nor will the Owner be liable to the Contractor for failure to accept or act upon any cost reduction proposal submitted, or for delays to the Work attributable to the consideration or implementation of any such proposal.

§ 13.9.4 If a cost reduction proposal is similar to a change in the drawings or specifications for the project under consideration by the Owner at the time the proposal is submitted, the Owner will not accept such proposal and reserves the right to make such changes without compensation to the Contractor under the provisions of this section.

§ 13.9.5 The Contractor shall continue to perform the Work in accordance with the requirements of the Contract until an executed Change Order incorporating the cost reduction proposal has been issued. If any executed Change Order has not been issued by the date upon which the Contractor's cost reduction proposal specifies that a decision should be made by the Owner, in writing, the cost reduction proposal shall be considered rejected.

§ 13.9.6 The Owner shall be the sole judge of the acceptability of a cost reduction proposal and of the estimated net savings in Contract Time and construction costs resulting from the adoption of all or any part of such proposal. Should the Contractor disagree with Owner's decision on the cost reduction proposal, there is no further consideration. The Owner reserves the right to make final determination.

§ 13.9.7 If the Contractor's cost reduction proposal is accepted in whole or in part, such acceptance will be made by a Contract Change Order that specifically states that the change is executed pursuant to this cost reduction proposal section. Such Change Order shall incorporate the changes in the drawings and specifications that are necessary to permit the cost reduction proposal or such part of it as has been accepted to be put into effect and shall include any conditions upon which the Owner's approval is based, if such approval is conditional. The Change Order shall also describe the estimated net savings in the cost of performing the Work attributable to the cost reduction proposal, and shall further provide that the Contract cost be adjusted by crediting the Owner with the estimated net savings amount.

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§ 13.9.8 Acceptance of the cost reduction proposal and performance of the Work does not extend the time of completion of the Contract, unless specifically provided in the Change Order authorizing the use of the submitted proposal. Should the adoption of the cost reduction proposal result in a contract time savings, the total contract time may be reduced by an amount equal to the time savings realized.

§ 13.9.9 The amount specified to the Contractor in the Change Order accepted in the cost reduction proposal shall constitute full compensation for the performance of Work. No claims for additional costs as a result of the changes specified in the cost reduction proposal shall be allowed.

§ 13.9.10 The Owner reserves the right to adopt and utilize any approved cost reduction proposal for general use on any Contract administered when it is determined suitable for such application. Cost reduction proposals identical, similar, or previously submitted will not be accepted for consideration if acceptance and compensation has previously been approved. The Owner reserves the right to use all or part of any cost reduction proposal without obligation or compensation of any kind to the Contractor.

§ 13.9.11 The Contractor shall bear the costs, if any, to revise all bonds and insurance requirements for the project, to include the cost reduction Work.

§ 13.10 USE OF THE CBJ GRAVEL PIT

§ 13.10.1 The City and Borough of Juneau (CBJ) may make unclassified material available to Contractor, from the CBJ gravel pit, at a rate less than that charged to other customers. Contractor is not required to use material from the CBJ gravel pit and the CBJ makes no guarantee as to the quantity or quality of the available material.

§ 13.10.2 If Contractor proposes to use material from the CBJ gravel pit, Contractor must meet all requirements for use of the CBJ gravel pit as determined by the CBJ Engineering Department, Gravel Pit Management. Additional information is available at (907) 586-0883.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a subcontractor, sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 an act of government, such as a declaration of national emergency that requires all Work to be stopped; or
- .3 because the Owner has not approved an application for payment and has not notified the Contractor of the reason for withholding approval as provided in Section 9.4, or
- .4 because the Owner has not made payment on an approved application for payment within the time stated in the Contract Documents.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a subcontractor of any tier, or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

§ 14.1.4 If the Work is stopped for a period of 90 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract

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with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor:

- .1 persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 accept assignment of subcontracts pursuant to Section 5.4; and
- .3 finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's/Engineer's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner shall be certified by the Owner upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or directed by the Owner, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

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§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

END OF SECTION 00 7000

SECTION 00 8000 - SUPPLEMENTARY GENERAL CONDITIONS OF THE CONTRACT

SGC 1: ADD the following to § 1.7 FEDERAL CONTRACT PROVISIONS

§ 1.7.1 ACCESS TO RECORDS AND REPORTS. (2 CFR § 200.326, 2 CFR § 200.333) The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration, and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

§ 1.7.2 BUY AMERICAN PREFERENCES. (49 USC § 50101) The Contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list. The appropriate Buy American Certification presented with the Bid shall be fulfilled through the execution of the Work.

§ 1.7.3 CIVIL RIGHTS – GENERAL. (49 USC § 47123) The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

§ 1.7.4 TITLE VI CLAUSES FOR COMPLIANCE WITH NONDISCRIMINATION REQUIREMENTS. (49 USC § 47123)

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

1. Compliance with Regulations: The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Statutes and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. Non-discrimination: The Contractor, with regard to the Work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the Contractor for Work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor’s obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the sponsor of the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. Sanctions for Noncompliance: In the event of a Contractor’s noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
 - b. Cancelling, terminating, or suspending a contract, in whole or in part.

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6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

§ 1.7.5 TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES. (49 USC § 47123) During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “Contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation - Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

§ 1.7.6 DISADVANTAGED BUSINESS ENTERPRISE. (49 CFR part 26) The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Juneau International Airport to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

- .1 Contract Assurance (§ 26.13) – The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out

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applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Owner deems appropriate, which may include, but is not limited to:

- a. Withholding monthly progress payments;
 - b. Assessing sanctions;
 - c. Liquidated damages; and/or
 - d. Disqualifying the Contractor from future bidding as non-responsible.
- .2 Prompt Payment (§26.29) - The prime Contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from the City and Borough of Juneau. The prime Contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City and Borough of Juneau. This clause applies to both DBE and non-DBE subcontractors.

§ 1.7.7 ENERGY CONSERVATION REQUIREMENTS. (2 CFR § 200, Appendix II(H)) Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201*et seq.*).

§ 1.7.8 FEDERAL FAIR LABOR STANDARDS ACT. (29 U.S.C. § 201, *et seq.*) All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers. The Contractor has full responsibility to monitor compliance to the referenced statute or regulation. The Contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

§ 1.7.9 OCCUPATIONAL SAFETY AND HEALTH ACT. (20 CFR part 1910) All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

§ 1.7.10 VETERAN'S PREFERENCE. (49 USC § 47112(c) In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

§ 1.7.11 COPELAND ANTI – KICKBACK ACT. (2 CFR § 200, Appendix II(D), 29 CFR Parts 3 & 5) Contractor must comply with the requirements of the Copeland “Anti-Kickback” Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered Work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

§ 1.7.12 DAVIS-BACON REQUIREMENTS. (2 CFR § 200, Appendix II(D), 29 CFR Part 5)

.1 Minimum Wages

- (i) All laborers and mechanics employed or working upon the site of the Work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part

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3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing Work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, that the employer's payroll records accurately set forth the time spent in each classification in which Work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the Work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The Work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *provided*, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable

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- standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
2. Withholding. The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
3. Payrolls and basic records.
- (i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the Work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the Work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- (ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (*e.g.*, the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime Contractor to require a subcontractor to provide addresses and social security numbers to the prime Contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or Owner).
- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

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- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;
 - (2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of Work performed, as specified in the applicable wage determination incorporated into the contract.
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.
- (D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
- (iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, sponsor, applicant or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
4. Apprentices and Trainees.
- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR Part 30.

.5 Compliance with Copeland Act Requirements. The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

.6 Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

.7 Contract Termination: Debarment. A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

.8 Compliance With Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

.9 Disputes Concerning Labor Standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

.10 Certification of Eligibility.

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

§ 1.7.13 DISTRACTED DRIVING. (Executive Order 13513, DOT Order 3902.10) In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

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In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$3,500 and involve driving a motor vehicle in performance of work activities associated with the project.

§ 1.7.14 EQUAL OPPORTUNITY. (2 CFR 200, Appendix II(C), 41 CFR § 60-1.4, 41 CFR § 60-4.3, part 60-4, Executive Order 11246) During the performance of this contract, the contractor agrees as follows:

- .1 The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identify or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- .2 The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
- .3 The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- .4 The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- .5 The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- .6 In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- .7 The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: *provided, however*, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

§ 1.7.15 EQUAL OPPORTUNITY SPECIFICATIONS. (2 CFR 200, Appendix II(C), 41 CFR § 60-1.4, 41 CFR § 60-4.3, part 60-4, Executive Order 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

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d. "Minority" includes:

- (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
- (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
- (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
- (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the Work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the

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organizations' responses.

c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or female sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

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8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

.9 A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

.10 The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

.11 The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

.12 The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

.13 The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

.14 The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.

.15 Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

§ 1.7.16 PROHIBITION AGAINST SEGREGATED FACILITIES. (41 CFR 60)

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom.

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The term does not include separate or single-user restrooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

§ 1.7.17 **PROCUREMENT OF RECOVERED MATERIALS.** (2 CFR § 200.322, 40 CFR part 247) Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

- a) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year; or,
- b) The contractor has procured \$10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/epawaste/conserve/tools/cpg/products/.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the Contractor can demonstrate the item is:

- a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
- b) Fails to meet reasonable contract performance requirements; or
- c) Is only available at an unreasonable price.

§ 1.7.18 **TAX DELINQUENCY & FELONY CONVICTIONS.** (2014 Consolidated Appropriations Act, Title IV, Division L, Sections 415 & 416) Bidders must complete two certification statements regarding its current status as it relates to tax delinquency and felony conviction. The certification statements are located in Section 00 4311 of the Bidding Requirements section of the contract documents.

§ 1.7.19 **TERMINATION OF CONTRACT FOR CONVENIENCE.** (2 CFR § 200 Appendix II(B), FAA Advisory Circular 150/5370-10, Section 80-09) The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

- .1 Contractor must immediately discontinue Work as specified in the written notice.
- .2 Terminate all subcontracts to the extent they relate to the Work terminated under the notice.
- .3 Discontinue orders for materials and services except as directed by the written notice.
- .4 Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed Work, supplies, equipment and materials acquired prior to termination of the Work and as directed in the written notice.
- .5 Complete performance of the Work not terminated by the notice.
- .6 Take action as directed by the Owner to protect and preserve property and Work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

- a) completed and acceptable Work executed in accordance with the contract documents prior to the effective date of termination;
- b) documented expenses sustained prior to the effective date of termination in performing Work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
- c) reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
- d) reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action. The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

SECTION 00 8000 - SUPPLEMENTARY GENERAL CONDITIONS OF THE CONTRACT

§ 1.7.20 TERMINATION OF CONTRACT FOR DEFAULT. Section 80-09 of FAA Advisory Circular 150/5370-10 establishes conditions, rights and remedies associated with Owner termination of this contract due default of the Contractor.

§ 1.7.21 DEBARMENT AND SUSPENSION. (2 CFR part 180 (Subpart C), 2 CFR part 1200, DOT Order 4200.5 The successful bidder, by administering each lower tier subcontract that exceeds \$25,000 as a “covered transaction”, must verify each lower tier participant of a “covered transaction” under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

- .1 Checking the System for Award Management at website: www.sam.gov
- .2 Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
- .3 Inserting a clause or condition in the covered transaction with the lower tier contract. If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

§ 1.7.22 CONTRACT WORKHOURS AND SAFETY STANDARDS ACT. (2 CFR § 200, Appendix II(E))

- .1 Overtime Requirements. No Contractor or subcontractor contracting for any part of the contract Work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such Work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- .2 Violation; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.
- .3 Withholding for Unpaid Wages and Liquidated Damages. The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.
- .4 Subcontractors. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

§ 1.7.23 BREACH OF CONTRACT. (2 CFR part 200, Appendix II(A)) Any violation or breach of terms of this contract on the part of the Contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner’s notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the Owner’s notice. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition

SECTION 00 8000 - SUPPLEMENTARY GENERAL CONDITIONS OF THE CONTRACT

to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

§ 1.7.24 CLEAN AIR/WATER POLLUTION CONTROL. (2 CFR § 200, Appendix II(G) Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration. Contractor must include this requirement in all subcontracts that exceeds \$150,000.

SGC 2: Add the following to § 11.1 INSURANCE

The limits of liability for the insurance required by Article 11 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations.

Insurance requirements apply as follows:

- A. Workers' Compensation: As in accordance with AS 23.30.045:
 - 1. State: Statutory
 - 2. Employer's Liability:

Bodily Injury by Accident:	\$100,000.00	Each Accident
Bodily Injury by Disease:	\$100,000.00	Each Employee
Bodily Injury by Disease:	\$500,000.00	Policy Limit

- B. Commercial General Liability (Primary Limits):
 - 1. a. General Policy

	\$1,000,000.00	Each Occurrence
	\$2,000,000.00	Annual Aggregate

 - b. Products/Completed Operations

	\$1,000,000.00	Each Occurrence
	\$2,000,000.00	Annual Aggregate

 - c. Personal Injury

	\$1,000,000.00	Each Occurrence
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- C. Comprehensive Automobile Liability: including Owned, Hired, and Non-Owned Vehicles:
 - 1. Combined Single Limit, Bodily Injury and Property Damage

	\$1,000,000.00	
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- D. Builder's Risk insurance, as described in Article 11 of the General Conditions is required for this project.

SGC 3: Add the following to § 11.2 PERFORMANCE AND PAYMENT BOND

§11.2.1 PERFORMANCE AND PAYMENT BOND AMOUNTS

.1 The Contractor shall furnish Performance and Payment Bonds on forms provided by the CBJ for the penal sums of 100% of the amount of the Bid award. The surety on each bond may be any corporation or partnership authorized to do business in the State of Alaska as an insurer under AS 21.09.

END OF SECTION 00 8000

SECTION 00 8520- PERMITS

PART 1 - GENERAL

1.1 INDEX OF PERMITS

1. Department of the Army, U.S Army Corps of Engineers, Juneau Regulatory Field Office, Regulatory Division, Nationwide Permit No. 3 and the associated General and Alaska District Regional Conditions that can be accessed at:
<http://www.poa.usace.army.mil/Missions/Regulatory/Permits/Nationwide-Permits/>
2. Alaska Department of Environmental Conservation, Nationwide Permit Certificate of Reasonable Assurance, March 1, 2017.
3. Alaska Department of Fish and Game Fish Habit Permit No. FH18-I-0117, August 6, 2018.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 1000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

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

B. Related Requirements:

1. Section 01 5000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification: JNU Float Pond Improvements

1. Project Location: Juneau International Airport, Kendler Way, Juneau, AK
2. Owner's Representative: to be designated by Patricia K. Wahto, Airport Manager

B. Engineer: PND Engineers, Inc. 9360 Glacier Highway, Suite 100, Juneau, Alaska 99801 (907) 586-2093

C. Engineer's sub-consultants: The engineer has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Stephl Engineering
2. Haight & Associates, Inc.

1.4 WORK COVERED BY CONTRACT DOCUMENTS: The WORK of the project is defined by the Contract Documents and generally consists of the following:

A. **BASE BID:**

Base Bid WORK generally consists of major improvements to the float pond outlet pipe and valve control structure including – but not limited to - the following: removal and replacement of existing asphalt paving; removal and disposal of existing CMP culvert; removal, salvage and re-installation of existing debris gate and modular concrete blocks; removal and replacement of chain link fencing; temporary fencing and flagging controls; construction surveying; excavation, dewatering, backfill and stabilization; temporary lowering of the float pond water level; new debris gate; slip lining and grouting an existing culvert; HDPE pipe; cast in place concrete valve vault; shut-off valve with electrical actuator and controls; topsoil and hydro seeding; erosion and sediment controls; and other miscellaneous related improvements.

ADDITIVE ALTERNATE ONE:

Additive Alternate One WORK generally consists of the removal and disposal of an existing debris grate and modular concrete blocks; new flapper gate lift system and concrete support wall improvements.

ADDITIVE ALTERNATE TWO:

Additive Alternate Two WORK consists of providing a trailer mounted generator per Electrical Item L-100 General Electrical Installation and Equipment.

SECTION 01 1000 - SUMMARY

- B. Type of Contract:
 - 1. All schedules and alternates (if awarded) will be constructed under a single prime contract.

- 1.5 ACCESS TO SITE
 - A. General: Contractor shall have limited use of Project site for construction operations as indicated on drawings by the contract limits and as indicated by requirements of this section.
 - B. Use of Site: Limit use of Project site to areas indicated. Do not disturb portions of project site beyond areas in which the Work is indicated.
 - 1. Limits of the Site: Limit use of the site for staging, storage, handling of debris and construction materials, deliveries, etc. to the areas indicated on the drawings.
 - 2. Parking: Employee private vehicles are to be parked in specified areas only.
 - 3. Driveways, Gates, and Building Entrances: Keep driveways, gates and entrances serving premises clear and available to Owner's employees, Airport users, 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 by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 - C. Security: Maintain airport security requirements (Section 01 5200) throughout the Work.

- 1.6 COORDINATION WITH OCCUPANTS
 - A. Full Owner Occupancy: Owner will occupy or utilize areas of the airport around the project site throughout the 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 day-to-day operations.
 - 1. Maintain access to existing roadways, walkways and other adjacent occupied or used facilities. Do not close or obstruct walkways or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Notify Owner not less than 48 hours in advance of activities that will affect Owner's operations.

- 1.7 WORK RESTRICTIONS
 - A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
 - 2. Work on site shall not commence until Owner has provided written approval of the Contractor's Construction Security Plan.
 - 3. Work on site shall not commence until Owner has provided written approval of the Safety Plan Compliance Document in accordance with FAA AC 150/5370-2F.
 - B. On-Site Work Hours:
 - 1. There are no limits to work hours within applicable noise ordinances of the City and Borough of Juneau.
 - C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Obtain Owner's written permission before proceeding with utility interruptions.
 - D. No Smoking and Controlled Substances: Use of tobacco products and controlled substances within the project area is not permitted.
 - E. Employee Identification: Provide identification tags for Contractor personnel working in secure areas of Project site. Require such personnel to use identification tags at all times. See Section 01 5200, Security for additional requirements.

SECTION 01 1000 - SUMMARY

- F. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working in secure areas of project site.

1.8 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 Requirements: Requirements of Sections in Division 01 apply to the Work of all sections in the specifications.
- C. Drawing Coordination: Requirements for materials and products identified on drawings are described in detail in the specifications. One or more of the following are used on drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on drawings.
 - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 1000

SECTION 01 1040 - SEQUENCING AND PHASING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this section. Construction Safety and Phasing Plan (CSPP) attached to these documents.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of project is defined by the Contract Documents and generally consists of the following:

1. Construction Activities to be completed in the base bid include, but are not limited to the following:

a. Preparation and submittal of preliminary documents including but not limited to:

- 1) Contractor's Schedule
- 2) Construction Security Plan
- 3) Safety Plan Compliance Document
- 4) Storm Water Pollution Prevention Plan
- 5) Traffic Control Plan(s)
- 6) Filing Labor Reports
- 7) Establishing Permit Coverage

b. Participation in Preconstruction Conference

c. Construction Survey

d. Installation of Temporary Security Fencing.

e. Preparation of Haul Route(s) and Staging Areas

f. Lowering of Float Pond Water Level

g. Removal of Existing Asphalt Paving

h. Excavation for Valve Vault

i. Dewatering of Excavation

j. Construction of Valve Vault Base

k. Demolition and Removal of Portion of 48-Inch CMP

l. Sliplining

m. Installation of Valve and Actuator

n. Cast Valve Vault Walls

o. Valve Vault Waterproofing

p. Backfilling and Compaction

q. Electrical Work

r. Install Valve Vault Cover

s. Installation of Permanent Security Fencing

t. Removal of Temporary Security Fencing

u. Subgrade Preparation at Seaplane Base Access Road

v. Place Base Course at Seaplane Base Access Road

w. Place Asphalt Pavement

x. Site Cleanup.

2. Closeout Activities to be completed in the base bid include, but are not limited to the following:

a. Preparation and submittal of final documents including but not limited to:

- 1) System Start-Up and Testing
- 2) Demonstration and Training
- 3) Record Drawings
- 4) Warrantees
- 5) Operation & Maintenance Manuals
- 6) Delivery of Spare Parts
- 7) Terminating Permit Coverage
- 8) Filing Labor Reports

B. Type of Contract:

1. All schedules and alternates (if awarded) will be constructed under a single prime contract.

SECTION 01 1040 - SEQUENCING AND PHASING

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 1040

SECTION 01 2500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Section 01 6000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit requests in a format required by the Owner. Identify product, fabrication, or installation method to be replaced. Include Specification Section number and title and drawing numbers and titles.
 - 1. Substitution Request Form: Use form provided by the Owner.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for project.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall contract time. If specified product or method of construction cannot be provided within the contract time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the contract sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.

SECTION 01 2500 - SUBSTITUTION PROCEDURES

- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- 3. Owner's Action: If necessary, Owner will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Owner will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Forms of Acceptance: Construction Change Directive and Change Order in accordance with the General Conditions.
 - b. Use product specified if Owner does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected Work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Owner will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Submit requests for substitution not later than 15 days following the Notice to Proceed.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 2500

SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 1. General coordination procedures.
 2. Coordination drawings.
 3. RFIs.
 4. ASIs.
 5. Project meetings.

1.3 DEFINITIONS

- A. RFI: Request for Information. Request from Owner or Contractor seeking information required by, or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Key Personnel Names: Prior to the Pre-Construction conference, or within ten days of receipt of contract award (whichever occurs first), submit a list of key personnel assignments, including superintendent and other personnel in attendance at project site. Identify individuals and their duties and responsibilities; list addresses and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to project.
 1. Post copies of list in project meeting room, in temporary field office and in prominent location in built facility. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different sections that depend on each other for proper installation, connection, and operation.
 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components before or after its own installation.
 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to Owner and each party involved, outlining special procedures required for coordination. Include required notices, reports, and list of attendees at meetings.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to:
 1. Preparation of Contractor's construction schedule.
 2. Preparation of the schedule of values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.

1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual sections, and additionally where installation is not completely indicated on shop drawings, where limited

SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - b. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - c. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 - d. Show location and size of access doors for concealed dampers, valves, and other controls.
 - e. Indicate required installation sequences.
 - f. Indicate dimensions shown on drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Owner indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
3. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
4. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
5. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
6. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
 - b. Light fixture, exit and emergency lights, smoke detector, and other fire-alarm locations.
 - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor-control center locations.
 - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
7. Fire-Protection System: Show the following:
 - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
8. Review: Owner will review coordination drawings to confirm that in general the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility.
9. Owner will furnish Contractor one set of digital data files of drawings for use in preparing coordination digital data files.
 - a. Architect/Engineer makes no representations as to the accuracy or completeness of digital data files as they relate to drawings.

1.7 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified by the Owner.
1. Owner will return without response those RFIs submitted to Architect/Engineer by other entities controlled by Contractor.

SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's Work or work of subcontractors.
 - B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation including the specification section, drawing number and detail references, and field dimensions and conditions, as appropriate. Provide Contractor's suggested resolution.
 - C. Owner's Action: Owner and Architect/Engineer (as needed) will review each RFI, determine action required, and respond. Allow seven working days for Owner's response for each RFI.
 1. Owner's action may include a request for additional information, in which case the time for response will date from time of receipt by Owner of additional information.
 2. Action on RFIs that may result in a change to the contract time or the contract sum may be eligible for Contractor to submit a cost/time proposal.
 - D. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number and submit to Owner periodically or as requested by Owner.
 - E. On receipt of Owner's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Owner within seven days if Contractor disagrees with response.
- 1.8 ARCHITECT'S SUPPLEMENTAL INFORMATION (ASI)
- A. General: Immediately on discovery of the need to provide additional information, clarification, or interpretation of the Contract Documents, Architect shall prepare and submit an ASI to the Contractor in the form specified by the Owner.
 1. Contractor shall coordinate and integrate ASIs promptly so as to avoid delays in the Work.
 2. If the Contractor believes that the ASI may result in a change to the contract time or the contract sum, it must immediately indicate so to the Owner. Owner will evaluate, and may request that the Contractor submit a cost/time proposal.
- 1.9 PROJECT MEETINGS
- A. General: Attend and participate in project meetings at project site unless otherwise indicated.
 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting.
 2. Agenda: Owner will prepare and distribute the meeting agenda. Contractor may request agenda items to the Owner.
 3. Minutes: Owner record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned within three days of receipt the meeting minutes.
 - B. Preconstruction Conference: Owner will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Contractor, but no later than 15 days after execution of the Agreement.
 1. Attendees: Authorized representatives of Owner, Architect and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Security and safety, including fist aid.
 - b. Responsibilities and personnel assignments.
 - c. Tentative construction schedule including critical work sequencing and long lead items.
 - d. Designation of key personnel and their duties, and lines of communication.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs and ASIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Submittal procedures.
 - j. Preparation of Record Documents.

SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

- k. Use of the premises including office, work areas, and storage areas.
 - l. Work restrictions and working hours.
 - m. Owner's occupancy requirements.
 - n. Responsibility for temporary facilities and controls, including moisture control.
 - o. Procedures for disruptions and shutdowns.
 - p. Construction waste management and recycling.
 - q. Parking availability.
 - r. Equipment deliveries and priorities.
 - s. Progress cleaning.
3. Minutes: Owner will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at project site before each construction activity when required by other sections and when required for coordination with other construction.
- 1. Attendees: Owner, Architect/Engineer, Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Related RFIs and ASIs.
 - c. Related Change Orders.
 - d. Deliveries.
 - e. Submittals.
 - f. Review of mockups.
 - g. Possible conflicts.
 - h. Time schedules.
 - i. Weather limitations.
 - j. Manufacturer's written instructions including warranty requirements.
 - k. Compatibility of materials and components.
 - l. Acceptability of substrates.
 - m. Temporary facilities and controls.
 - n. Space and access limitations.
 - o. Regulations of authorities having jurisdiction.
 - p. Testing and inspecting requirements.
 - q. Installation procedures.
 - r. Coordination with other work.
 - s. Required performance results.
 - t. Protection of adjacent work.
 - u. Protection of construction and personnel.
 - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to parties in attendance and/or requiring information.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than seven days prior to the scheduled date of Substantial Completion.
- 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 - 2. Attendees: Authorized representatives of Owner, Architect/Engineer and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Discuss items of significance that could affect Project closeout, including the following:
 - a. Preparation of Record Documents.
 - b. Procedures required prior to inspections leading up to Substantial Completion and final inspection for acceptance.

SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

- c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for delivery of material samples, attic stock, and spare parts.
 - f. Requirements for demonstration and training.
 - g. Preparation of Contractor's punch list.
 - h. Procedures for processing Applications for final payment.
 - i. Responsibility for removing temporary facilities and controls.
4. Minutes: Owner will record and distribute meeting minutes.
- E. Progress Meetings: Owner will conduct progress meetings at regular intervals.
1. Attendees: In addition to representatives of Owner, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct/approve minutes of previous progress meeting. Review other items of significance that could affect progress.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the contract time.
 - 1) Review schedule for activities expected to be accomplished during the coming two week period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Coordination and interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access and site use.
 - 7) Progress cleaning.
 - 8) Quality and work standards.
 - 9) Status of correction of deficient items.
 - 10) Field observations.
 - 11) Status of RFIs/ASIs
 - 12) Status of Proposal Requests.
 - 13) Status of Change Orders.
 - 14) Pending claims and disputes.
 3. Minutes: Owner will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 3100

SECTION 01 3200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Start-up construction schedule.
 - 2. Contractor's construction schedule.
 - 3. Construction reports.
- B. Related Sections:
 - 1. General Conditions and Supplementary General Conditions of the Contract.
 - 2. Division 1 and technical specification sections, as applicable.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of the project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned project completion date.
- F. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit schedules in electronic format using Microsoft Project or other software approved by the Owner.
- B. Start-up construction schedule.
 - 1. Approval of cost-loaded start-up construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Start-up Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.

SECTION 01 3200 - CONSTRUCTION PROGRESS DOCUMENTATION

- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - E. Construction Reports: Submit at monthly intervals using Microsoft Word for narrative and Microsoft Project for schedules, or other format approved by the Owner.
 - F. Special Reports: Submit at time of unusual event in format approved by the Owner.
- 1.5 COORDINATION
- A. Coordinate Contractor's construction schedule with the schedule of values, subcontracts, submittal schedule, progress reports, payment requests, and other schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved; monitor and maintain commitments throughout the Work.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from Notice to Proceed to the date of final completion.
- B. Activities: Treat each phase or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Owner.
 - 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 30 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to shop drawing development, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times.
 - 4. Startup and Testing Time: Include not less than 5 days for startup and testing.
 - 5. Substantial Completion: Indicate completion in at least 5 days in advance of date established for Substantial Completion, and allow time for Owner's administrative procedures necessary for certification of Substantial Completion.
 - 6. Punch List and Final Completion: Include not more than 30 days for punch list and final completion (combined).
- C. Milestones: Include milestones indicated in the contract documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completions, and Final Completion.
- D. Upcoming Work Summary: Prepare a weekly summary report, indicating activities scheduled to occur for at least 2 weeks ahead of Work. Summarize the following issues:
 - 1. Unresolved issues.
 - 2. Unanswered RFIs.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
- E. Recovery Schedule: When periodic update indicates the Work is 5 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and indicate date by which recovery will be accomplished.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a preliminary Gantt-Chart Schedule at the Preconstruction conference, and a subsequent comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's construction

SECTION 01 3200 - CONSTRUCTION PROGRESS DOCUMENTATION

schedule within 7 days of the Notice to Proceed that includes materials or components that require more than 30 days from order to be received on site.

2.3 REPORTS

- A. Monthly Construction Reports: Prepare a monthly construction report recording the following information concerning events at project site:
1. List of subcontractors at project site.
 2. Approximate count of personnel at project site, recorded daily.
 3. Equipment at project site.
 4. Material deliveries.
 5. Accidents and emergency procedures initiated.
 6. Meetings and significant decisions.
 7. Unusual events such as stoppages, delays, shortages, and losses.
 8. Orders and requests of authorities having jurisdiction.
 9. Request for Proposals accepted and implemented.
 10. Construction Change Directives received and implemented.
 11. Services connected and disconnected.
 12. Equipment or system tests and startups.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals in conjunction with Request for Payment, or at other times as requested by the Owner, update schedule to reflect actual construction progress and activities.
1. Revise schedule immediately after each progress meeting or other activity where revisions have been recognized or made.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate final completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect/Engineer, Owner, sub-contractors, and other parties identified by Contractor with schedule responsibility.
1. Post copies in Project meeting room.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 3200

SECTION 01 3250 - SCHEDULE OF VALUES

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 PREPARATION OF SCHEDULE OF VALUES

- A. The Schedule of Values shall be developed in close association with the Construction Schedule activities and logic.
 - 1. The Contractor shall submit a preliminary Schedule of Values for the major components of the Work prior to the Preconstruction Conference. The listing shall include, at a minimum, the proposed value for the major Work components within each phase of the Work.
 - 2. The Contractor and Owner shall meet and jointly review the preliminary Schedule of Values and make any adjustments in value allocations necessary, if in the opinion of the Owner, 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 Owner may require inclusion of other major Work components not included in the above listing, if, in the opinion of the Owner, such additional components are appropriate. This review and any necessary revisions shall be completed prior to the Pre-Construction Conference.
 - 3. Once agreed upon, the Schedule of Values shall become the basis for Progress Payments throughout the project. The Progress Payments shall be submitted on a form acceptable to the Owner.

1.3 CHANGES TO THE SCHEDULE OF VALUES

- 1. The Contractor and Owner may agree to make adjustments to the original Schedule of Values because of inequities discovered in the original detailed Schedule of Values or because of additional Work added to the contract via Change Order.
- 2. The Schedule of Values shall be updated with each request for Payment.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 3250

SECTION 01 3300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 specification sections, apply to this Section.
- B. Submittal requirements may be included in technical specification sections.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting shop drawings, product data, samples, and other submittals.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect/Engineer's responsive action. Action submittals are those submittals indicated in individual specification sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect/Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual specification sections as "informational submittals."
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - 4. Submit revised submittal schedule to reflect submittal status and timing.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Digital Data Files: Owner will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing shop drawings.
 - 1. Architect/Engineer makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Submit all submittal items required for each specification section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 - 3. Submit action submittals and informational submittals required by the same specification section as separate packages under separate transmittals.

SECTION 01 3300 - SUBMITTAL PROCEDURES

4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.

- D. Electronic Submittals: Identify and incorporate the following information in each electronic submittal file:
 1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect/Engineer.
 4. Transmittal Form for Electronic Submittals: Use form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date of submission.
 - c. Name of Contractor.
 - d. Names of subcontractor, manufacturer, and supplier.
 - e. Submittal purpose and description.
 - f. Specification section number and title.
 - g. Drawing number and detail references, as appropriate.
 - h. Location(s) where product is to be installed, as appropriate.
 - i. Related physical samples submitted directly.
 - j. Indication of full or partial submittal.
 - k. Transmittal number.
 - l. Other necessary identification.

- E. Options: Identify options requiring selection by Owner.

- F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect/Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect/Engineer's action stamp.

- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

SECTION 01 3300 - SUBMITTAL PROCEDURES

- I. Use for Construction: Retain complete copies of submittals on project site. Use only final action submittals that are marked with approval notation from Architect/Engineer's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual specification sections. Types of submittals are indicated in individual specification sections.
 1. Submit electronic submittals via email as PDF electronic files.
 - a. Owner will return annotated file. Annotate and retain one copy of file as an electronic project record document file.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as shop drawings, not as product data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's product specifications.
 - b. Color charts.
 - c. Statement of compliance with specified referenced standards.
 - d. Testing by recognized testing agency, with labels and seals noted.
 - e. Notation of coordination requirements.
 - f. Availability and delivery time information.
 4. Submit Product Data before or concurrent with samples.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect/Engineer's digital data drawing files is otherwise permitted.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit shop drawings on sheets at least 8.5x11.
 3. Submit shop drawings in PDF electronic file.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of samples that includes the following:
 - a. Generic description of sample.
 - b. Product name and name of manufacturer.
 - c. Number and title of applicable specification section.
 - d. Specification paragraph number and generic name of each item.
- E. Application for Payment and Schedule of Values: Comply with requirements specified in the General Conditions and other Division 1 sections.

SECTION 01 3300 - SUBMITTAL PROCEDURES

- F. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 7700 "Closeout Procedures."

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Owner.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01770 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include project name and location, submittal number, specification section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 OWNER'S ACTION

- A. Action Submittals: Owner will review each submittal, make marks to indicate corrections or revisions required, and return it. Owner may forward submittal to Architect/Engineer who will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- C. Submittals not required by the Contract Documents may be returned by the Owner without action.

END OF SECTION 01 3300

SECTION 01 4000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 specification sections, apply to this section.
- B. Divisions 2 through 41 for specific test and inspection requirements.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the contract document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the sections that specify those activities. Requirements in those sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the contract document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Owner or authorities having jurisdiction are not limited by provisions of this section.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by the Owner.
- C. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee or subcontractor to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.
- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this project; being

SECTION 01 4000 - QUALITY REQUIREMENTS

familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Owner for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. Refer uncertainties to Owner for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Contractor's Quality-Control Manager Qualifications: For supervisory personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the applicable systems or components.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications acceptable to the Owner.

1.6 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: The Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.
- B. Submit quality-control plan in a form acceptable to the Owner within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule. The Contractor shall discuss and present, at the preconstruction conference, its understanding of the quality control requirements.
- C. In accordance with FAA General Provisions, paving projects over \$500,000 in value shall have a Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Contractor, subcontractors, testing laboratories, and Owner's representative at start of construction. The workshop shall address QC and QA requirements of the project specifications. The Contractor shall coordinate with the Owner and the Engineer on time and location of the QC/QA workshop.
- D. Quality-Control Program Administrator: The Contractor shall appoint a Quality Control Program Administrator who shall have a minimum of five (5) years of experience in airport construction and shall have had prior quality control experience on a project of comparable size and scope as the contract. The Program Administrator shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract documents and technical specifications. The Program Administrator shall report directly to a responsible officer of the construction firm.

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- E. Quality-Control Technicians: A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall be registered engineers, registered architects, engineering/construction management technicians, or experienced craftsman with qualifications in the appropriate trade and field or work, and shall have a minimum of two years of experience in their area of expertise as quality control technicians. The quality control technicians shall report directly to the Program Administrator.
- F. Testing and Inspection: Include in quality-control plan a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 - 2. Special inspections required by authorities having jurisdiction and as indicated by the Owner.
 - 3. Owner-performed tests and inspections indicated in the contract documents.
- G. Continuous Inspection of Work quality: Describe process for continuous inspection during construction to identify and correct deficiencies in work quality in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of quality established by contract requirements.
- H. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Owner has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections in a format acceptable to the Owner. Include the following:
 - 1. Date of issue.
 - 2. Name, email address, and telephone number of testing agency and/or persons making tests and inspections.
 - 3. Dates and locations of samples and tests or inspections.
 - 4. Description of the Work and test and inspection method.
 - 5. Identification of product and specification section.
 - 6. Complete test or inspection data, results, and interpretation thereof.
 - 7. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 8. Name and signature of laboratory inspector.
 - 9. Recommendations on retesting and re-inspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other sections in a format acceptable to the Owner. Include the following:
 - 1. Name, address, email, and telephone number of technical representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Statement that products at project site comply with requirements.
 - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 6. Statement whether conditions, products, and installation will affect warranty.
 - 7. Other required items indicated in individual specification sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections in a format acceptable to the Owner. Include the following:
 - 1. Name, address, email, and telephone number of factory-authorized service representative making report.

SECTION 01 4000 - QUALITY REQUIREMENTS

2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual specification sections.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- 1.8 QUALITY ASSURANCE
- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual specification sections specify additional requirements.
 - B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project for at least five years and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
 - C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project for at least five years and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
 - D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project for at least five years and whose work has resulted in construction with a record of successful in-service performance.
 - E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where project is located and who possesses at least five years' experience in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this project in material, design, and extent.
 - F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated for a period of at least five years prior to the project.
 - G. Manufacturer's Technical Representative and Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products and has at least five years' experience in projects similar in material, design, and extent to those indicated for this project.
- 1.9 QUALITY CONTROL
- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency or inspector to perform these services.
 1. Owner will furnish Contractor with names, addresses, email, and telephone numbers of testing agencies or inspectors engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the contract documents, or that the Contractor requested to proceed on a partial basis to accommodate construction sequencing will be charged to Contractor, and the contract sum will be adjusted by Change Order.

SECTION 01 4000 - QUALITY REQUIREMENTS

- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 - 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction.
 - 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report of each quality-control service.
 - 5. Testing and inspecting requested by Contractor and not required by the contract documents are Contractor's responsibility.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections, and submittal written reports.
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

1.10 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as described in the contract documents, and as follows:
 - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 2. Notifying Owner and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 3. Submitting a written report of each test, inspection, and similar quality-control service to Owner with copy to Contractor and to authorities having jurisdiction, when applicable.
 - 4. Submitting a final report of special tests and inspections at Substantial Completion that includes a list of unresolved deficiencies.
 - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the contract documents.
 - 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FREQUENCY

- A. Contractor shall implement the Quality Control Program throughout the Work. Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature of work.
- B. During field operations, quality control test results and periodic inspections shall be used to ensure the quality of all materials and work quality. All equipment used in placing, finishing, assembling, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such

SECTION 01 4000 - QUALITY REQUIREMENTS

operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified.

3.2 TEST AND INSPECTION LOG

- A. Prepare a record of tests and daily inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date test or inspection results were transmitted to Owner.
 - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Owner's reference during normal working hours.

3.3 DOCUMENTATION

- A. Daily Inspection Reports. Each of the Contractor's quality control technicians shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:
 - 1. Technical specification item number and description
 - 2. Compliance with approved submittals
 - 3. Proper storage of materials and equipment
 - 4. Proper operation of all equipment
 - 5. Adherence to plans and technical specifications
 - 6. Review of quality control tests
 - 7. Safety inspection.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed. The daily inspection reports shall be signed by the responsible quality control technician and the Program Administrator. The Owner shall be provided at least one copy of each daily inspection report on the work day following the day of record.

3.4 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes in accordance with the contract document requirements for cutting and patching.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 4000

SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

- B. Related Requirements:

- 1. Section 01 5200 "Security"

1.3 USE CHARGES

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

- B. Water Service from Existing System: Water is not readily available from Owner's existing water system for use by the Contractor at the project site. Contractor is to haul water to the site as needed. If connecting to the Owner's water from a source outside of the project site, Contractor is to provide all connections as required and is to obtain water in a manner that is in compliance with the authorities having jurisdiction. The Contractor's water connection to Owner's water system shall include a water meter. Contractor assumes responsibility for operation, maintenance, and protection of each permanent service during its use.

Electric Power: There is no power service at the project site. Contractor shall provide temporary electrical generation as needed for construction operations.

- C. Toilets: Contractor shall provide clean and functional temporary toilet facilities that shall be regularly maintained for use of Contractor's personnel throughout the project.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, staging areas, and parking areas for construction personnel.
- B. Erosion and Sedimentation-Control Plan: Show compliance with requirements of JNU Airport's multi-sector permit for storm water discharge for Work that affects existing surface drainage.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
 - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.

1.5 QUALITY ASSURANCE

- A. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- B. Accessible Temporary Egress: Comply with applicable codes and airport regulations to maintain vehicle access to the Emergency Vehicle Access Road (EVAR) and to the Seaplane Base Access Road at all times. Vehicle access to the float pond may be re-routed around the east end of the float pond.

SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

Field Office: Contractor shall establish a mobile field office in the designated project staging and storage area on airport property, or in another location agreed to by the Owner.

- A. Storage: Provide temporary shelter as needed to protect construction materials.

2.2 EQUIPMENT

- A. Dewatering Pumps: Provide pump(s) as needed to drain the float plane pond and to maintain the pond level of 13' MLLW for the duration of WORK.

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

- B. Temporary Heating Equipment: Provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters or open-flame heating units is prohibited.
2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Obtain written approval of temporary facility locations by the Owner and locate where they will serve project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

- B. Provide each facility ready for use when needed to avoid delay. Promptly remove facilities when they are no longer needed.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary services or connect to existing services.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
2. At Substantial Completion, remove or restore all temporary facilities to condition existing before initial use.

- B. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Coordinate the type and placement of temporary lighting with Owner to avoid the introduction of glare in the direction of the control tower, active runway and taxiways.
2. Turn all temporary work lighting off when not in use.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Temporary Use of Permanent Roads and Paved Areas: Contractor may utilize existing roads and paved areas as necessary for construction operations and in accordance with Airport safety and security regulations.

- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment, access to fire hydrants and access to the Emergency Vehicle Access Road (EVAR).
3. Maintain established vehicular and aircraft traffic routes in and around the Work area.

- C. Parking: Use designated parking areas for construction personnel.

- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding project or adjoining properties or endanger permanent Work or temporary facilities.

SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

2. Juneau International Airport holds a multi-sector permit issued by the Alaska Department of Environmental Conservation for storm water discharge. Contractor shall comply with all applicable permit conditions through completion of the Work.
 - E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Airport safety requirements regarding Flying Object Debris (FOD).
- 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION
- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, fencing and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
 - B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - C. Security Enclosure: Install temporary enclosure around partially completed areas of construction to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 - D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
 - E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
 - F. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
 1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures.
- 3.5 OPERATION, TERMINATION, AND REMOVAL
- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
 - B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 1. Materials and facilities that constitute temporary facilities are property of Contractor.
 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

END OF SECTION 01 5000

SECTION 01 5200 - SECURITY AND SAFETY

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 SECURITY PROGRAM AT JUNEAU INTERNATIONAL AIRPORT

- A. The Contractor shall:
 - 1. Protect Work area and existing premises and Owner's operations from theft, vandalism, and unauthorized entry.
 - 2. Prepare a Safety Plan in compliance with FAA Advisory Circular 150/5370-2.
 - 3. Initiate security program, approved by Owner, prior to start of Work, including coordination of all temporary fencing, gates, and controls to meet Transportation Security Administration (TSA) and JNU Airport Security requirements.
 - 4. Maintain program throughout construction period until Owner's occupancy.
 - 5. All security changes necessary for construction activities to the perimeter gates, doors, and/or fence must be requested at least 60 days in advance. Temporary changes may be requested within 72 hours.
 - 6. Vehicles, equipment, and stockpiled material may not be parked or staged within 6 feet of the perimeter fence, gate, and/or door.

1.3 ACCESS CONTROL

- A. The Contractor shall:
 - 1. Provide a secure Work area in accordance with the drawings and other provisions relating to Airport Security.
 - 2. Restrict entry of persons and vehicles into the project site and the airport restricted area (airport property inside the fence).
 - 3. Allow entry only to authorized persons with proper identification.
 - 4. Construct all temporary fencing, gates and controls in accordance with applicable security requirements.
 - 5. **Utilize Gate E in accordance with JNU Airport security to access the Work site.**
- B. Owner shall control entrance of persons and vehicles related to Owner's operations.
- C. The Contractor shall be liable for any fines levied against the Airport by the TSA resulting from actions of the Contractor, or those for whom the Contractor is responsible, that cause a breach of security to include any points of entry into the Air Operations Area (AOA), also known as the restricted area of the Airport, utilized for the construction project. Failure to maintain security will also include failure to abide by the Airport badge identification program or other requirements pertaining to the security of the Airport.

1.4 AIR OPERATIONS AREA (AOA) BADGE REQUIREMENTS

- A. Only Juneau International Airport Identification Badge, Law Enforcement Credentials, Federal Inspector Credentials and Airline Crew Credentials are recognized as authority to enter or be present in the restricted area of the airport without escort. Only persons identified by this system are permitted access.
- B. Any person found in a location that is not the work area or access route to and from the work area will be removed from the area and action will be taken against violators as appropriate.
- C. **General Aviation (GA) badges are required for the Work.** Contractor shall apply for clearance with Juneau International Airport Badging Office. Requirements for each employee include completing an Identification Badge/Media Application, photo proof of identity, either proof of US citizenship or work authorization paperwork, and completion of a Federal Security Threat Assessment. - Contractor shall assume a minimum of two weeks for the clearance process, however, the clearance process is conducted by TSA and delays may exceed two weeks.
- D. Contractor's personnel are subject to random checks for compliance with badging and permit regulations.

SECTION 01 5200 - SECURITY AND SAFETY

Such checks may be conducted by Airport Police, Airport Employees, and/or TSA.

- E. Any falsifications can result in revocation of the badges for the individual in question, and any fines incurred from the violations will be passed to the Contractor.
 - F. The Airport Badge Application is an agreement between the Airport and the badge holder. The badge application provides all rules and procedures the badge holder must comply with while in the restricted area of the airport.
 - G. In order to maintain accountability for all Airport Identification Badges issued, the Contractor is responsible for physically collecting and returning to the Airport all outstanding badges no longer used for the construction project including those badges carried by persons no longer working on the project. Proof of return is the Airport Receipt issued by the Airport.
 - H. When someone terminates employment, the Contractor shall immediately notify the Airport so that the badge can be deactivated. If termination is outside of the normal working hours, the Contractor shall immediately notify Airport Police at 586-0899 or 321-3802 of the termination.
 - I. A non-refundable fine of \$300.00 will be levied against the Contractor for each badge not returned within five (5) days of badge expiration, employee termination or completion of the project, whichever is sooner.
 - J. Should an employee lose his or her Airport Identification Badge, he or she shall immediately notify the Contractor, who shall then immediately notify the Airport to deactivate the badge access. If lost after normal business hours, the lost badge shall be reported to Airport Police. If the lost badge is found the Contractor must notify the Airport to reactivate the badge. Further, the Airport will confirm the employee's employment status prior to reactivation of a badge reported lost, then found by its owner. If requested, a replacement badge will not be issued until a replacement request letter is received and the \$200.00 lost badge fee is paid. This is a separate fee from the non-refundable fine of \$300.00 applied to non-returned badges. If a replacement badge is issued for a lost badge, *and* the \$200.00 fee paid, the Contractor will not be charged the non-refundable fine of \$300.00 as long as the badge is replaced within 5 days of notification of the lost badge.
 - K. Final payment to the Contractor will not be authorized until all badges are returned to the Airport.
 - L. The Contractor's and subcontractor's personnel shall be badged for this project as needed to complete the Work. Upon request of the Contractor, Escort Authority may be authorized by the Owner to specific employees or subcontractors of the Contractor when the Work is limited in duration. In such cases, the Contractor is fully responsible for all such personnel.
- 1.5 VEHICLE ACCESS IN THE AOA
- A. The TSA requires the Airport Operator to control access into and prevent unauthorized vehicles from entering the AOA. In compliance with this requirement, the Airport Operator has established procedures to authorize or deny access to the AOA and to identify and control vehicles while within the AOA.
 - B. When any vehicle, other than one that has prior approval from the airport operator, must travel over any portion of an area used by aircraft moving under its own power, as well as the 135-AOA ramp, it will be properly identified and an amber colored rotating beacon is required.
 - C. All Contractor vehicles requiring access to the AOA shall display a company name/logo. Company name/logo must be affixed to both sides of the vehicle (vehicle magnets are not prohibited in the AOA).
 - D. Contractor vehicles are only authorized in the areas where their contract work is being performed and on the access routes to and from that area; during contract working hours (unless otherwise required for emergencies).

SECTION 01 5200 - SECURITY AND SAFETY

- E. A Contractor vehicle is authorized in the AOA only when within its area of authorization, the safety flag are properly displayed, and all occupants have the required Airport Identification Badge.

1.6 PROJECT SITE SECURITY

- A. All access points into the project area must be kept secure. The installation of the temporary fence shall be required and described in the Contractor's approved Safety Plan Compliance Document. The Contractor shall notify the Owner at least 72 hours before the following conditions:
 1. When construction is to begin.
 2. When Work is complete.

1.7 SAFETY PLAN

- A. Contractor shall submit a written Safety Plan Compliance Document developed in accordance with FAA Advisory Circular 150/5370-2 for work in the AOA. The plan shall address the following:
 1. Maintaining safe airport operations in the vicinity of the Work, including separating pedestrian, vehicles, equipment, and aircraft.
 2. Maintaining clean and safe construction operations including controlling Foreign Object Debris (FOD).
 3. Controlling access to the Work area through the use of temporary fencing and barricades and restricting access by unauthorized persons.
 4. Understanding the safety problems and hazards described in AC 150/5370-2, *Operational Safety on Airports During Construction*.
 5. Conducting activities so as not to violate any safety standards contained in AC 150/5370-2 or any of the references therein.
 6. Promptly taking all actions necessary to prevent or remedy any unsafe or potentially unsafe conditions as soon as they are discovered.
 7. Identifying locations for stockpiled materials, equipment operations, access to haul routes, and construction site parking.
 8. Marking the area of Work as a hazardous area on the aircraft ramp area with barricades, traffic cones, flags, or flashers. These markings restrict access and make hazards obvious to aircraft, personnel, and vehicles. During periods of low visibility and at night, identify hazardous areas with red flashing or steady-burning light.
 9. The Contractor must ensure that all trash, debris, and bird attractants are stored in proper areas. Further, all vehicles/equipment are clean of bird attractants.
- B. Contractor's overall project safety plan shall be reviewed and updated at Progress Meetings and at other times as required by the Owner's Representative.

1.8 RESTRICTIONS

- A. The Contractor shall not allow cameras on site or photographs to be taken by persons under the control of the Contractor except by written approval of the Owner.
- B. Contractor shall, at all times, give way to all aircraft and follow directions from aircraft ground crews.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 5200

SECTION 01 6000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Section 01 2500 "Substitution Procedures" for requests for substitutions.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.
 - 1. Include data to indicate compliance with the contract documents requirements.
 - 2. Owner's Action: If necessary, Owner will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Owner will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Use form of Approval: As specified in Section 01 330 "Submittal Procedures."
 - b. Use product specified if Owner does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 330 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

SECTION 01 6000 - PRODUCT REQUIREMENTS

- B. Delivery and Handling:
 - 1. Schedule delivery to minimize storage at project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration or theft.
 - 3. Deliver products to project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 6. Protect stored products from damage and liquids from freezing.
 - 7. Provide a secure location and enclosure at project site for storage of materials and equipment. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other sections shall be in addition to, and run concurrent with, other warranties required by the contract documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations of the contract documents.
 - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

- C. Submittal Time: Comply with requirements in Section 01 7700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete roofing system installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

SECTION 01 6000 - PRODUCT REQUIREMENTS

4. Where products are accompanied by the term "as selected," Owner will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:

1. Products:
 - a. Restricted List: Where specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
2. Manufacturers:
 - a. Restricted List: Where specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Owner will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Owner may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require revisions to the contract documents, is consistent with the contract documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 6000

SECTION 01 7113 - MOBILIZATION

PART 1 GENERAL

1.1 GENERAL

- A. Mobilization shall include obtaining all permits; moving all plant and equipment onto the site; furnishing and erecting temporary buildings and other construction facilities; implementing security requirements, and providing all required start up documentation to the Owner, 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, except building permit which will be obtained by owner.
 5. Having all OSHA-required notices and establishment of safety programs.
 6. Having the Contractor's superintendent at the jobsite full time.
 7. Submitting initial submittals.
 8. Installing perimeter construction fence.

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 Documents 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 on the Schedule of Values a breakdown showing the estimated value of each major component of Mobilization. When approved by the Owner, 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 01 7113

SECTION 01 7123 - CONSTRUCTION SURVEYING

PART 1 GENERAL

1.1 DESCRIPTION

- 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 engineering and surveying practices, including all calculations 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 in the State of Alaska.
- B. The Owner 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 Owner may, after first notifying the Contractor, replace the monuments in question. The cost of such replacements shall be deducted from payment to the Contractor.
- D. All surveys must be provided to the Owner prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. In the case of error on the part of the Contractor, its surveyor, employees or subcontractors resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the drawings, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

3.2 NOTES AND RECORD DRAWINGS

- A. The Contractor shall provide the Owner with copies of all survey notes for each area of construction and for each placement of material as specified to allow the Owner to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications.
- B. The Contractor shall include all surveyors' notes including actual measurements, observations made by its own personnel and subcontractors, and similar as-built information on the record drawings.
- C. Field notes shall be kept in standard bound notebooks in a clear, orderly and neat manner, consistent with standard engineering and surveying practices. The Contractor's field books shall be available for inspection by the Owner at any time.
- D. All field survey notes, including those which become source documentations from which quantities for payment are computed, shall be recorded by a notekeeper furnished by the Contractor. The notekeeper shall be thoroughly familiar with generally accepted standards of good survey notekeeping practice.

3.3 LAYOUT AND STAKING

- A. 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.

CONSTRUCTION SURVEYING - 01 7123

- B. The Contractor must establish all layout required for construction of the Work. Such stakes and markings as the Owner may set for either their own or the Contractor's guidance shall be preserved by the Contractor.
- C. The Contractor shall perform all staking necessary to delineate clearing and/or grubbing limits; all cross sections necessary for determination of excavation and embankment quantities, including intermediate and/or remeasure cross sections as may be required; all slope staking; all staking of culverts and drainage structures, including the necessary staking to establish the proper location and grade to best fit the conditions on site; the setting of such finishing stakes as may be required; the staking of right-of-way; the staking, referencing and other actions as may be required to preserve or restore land monuments and property corners; and all other staking necessary to complete the project. Staking and layout includes, but is not limited to:
1. Clearing and grubbing staking.
 2. Rough grade slope stakes at 100-ft stations.
 3. Drainage swales slope stakes and flow line blue tops at 50-ft stations.
 4. Subgrade blue tops at 25-ft stations and 25-ft offset distance (max) for roadways.
 5. Edge of pavement hubs and tacks (for string line by Contractor) at 100-ft stations.
 6. After finish paving operations at 50-ft stations, edge of each paving lane prior to next paving lot.
 7. Shoulder blue tops at 50-ft stations and at all break points with maximum of 50-ft offsets.
 8. Fence lines at 100-ft stations minimum.
 9. Electrical and communications system locations, lines and grades.
 10. Drain lines, cut stakes and alignment on 25-ft stations, inlets, and manholes.
 11. Painting and striping layout marked for painting.
- D. The Owner may randomly spot-check the Contractor's surveys, staking and computations. After the survey or staking has been completed, the Contractor shall provide the Owner 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 Owner assumes no responsibility for the accuracy of the Work.
- E. Within ten days of Notice to Proceed, unless otherwise approved by the Owner, the Contractor shall stake the location of water, sewer, and/or storm drain service connections included in the project. The stake shall be a surveyors' lath marked as to the type of service, and placed at designated locations shown on the drawings.

END OF SECTION 01 7123

SECTION 01 7300 - EXECUTION

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 general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Installation of the Work.
- B. Related Requirements:
 - 1. Section 01 1000 "Summary" for limits on use of Project site.
 - 2. Section 01 3300 "Submittal Procedures" for submitting surveys.
 - 3. Section 01 7700 "Closeout Procedures" for submitting final documents, recording of Owner-accepted deviations during construction, and final cleaning.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Owner of locations and details of cutting and await directions from Owner before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or in increased maintenance or decreased operational life or safety.
 - 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety
 - 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Cutting and Patching Conference: Before proceeding, meet at project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Owner for the visual and functional performance of in-place materials.

SECTION 01 7300 - EXECUTION

PART 3 - EXECUTION

3.1 EXAMINATION AND LAYOUT

- A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with installer or applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to the Owner according to requirements in Section 01 3100 "Project Management and Coordination."
- D. Surface and Substrate Preparation: Comply with manufacturer's written recommendations for preparation of substrates to receive subsequent work.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

SECTION 01 7300 - EXECUTION

- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
 - I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
 - J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
- 3.4 CUTTING AND PATCHING
- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
 - B. Temporary Support: Provide temporary support of work to be cut.
 - C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of project that might be exposed during cutting and patching operations.
 - D. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
 - E. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

SECTION 01 7300 - EXECUTION

- a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- F. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.
- 3.5 PROTECTION OF INSTALLED CONSTRUCTION
- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

END OF SECTION 01 7300

SECTION 01 7419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 specification sections apply to this section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Disposing of nonhazardous demolition and construction waste.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Foreign Object Debris (FOD): A substance, debris or article alien to aircraft that would potentially cause damage to aircraft or flight control mechanisms. FOD includes, but is not limited to, loose hardware, tools, pavement fragments, trash, building materials, rocks, pens, coins, hats, soda cans, paper clips, rags, and wildlife.
- E. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- F. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- G. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Provide handling, containers, storage, signage, transportation, and other items as required to handle waste during the entire duration of the contract.
 - 1. Comply with operation, termination, and removal requirements in Section 01 5000 "Temporary Facilities and Controls."
- B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on project site necessary for waste management.
 - 2. Comply with Section 01 5000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.
- C. Comply with Airport safety requirements regarding Foreign Object Debris (FOD). Release of uncontrolled debris or materials of any kind is prohibited any place on or over airport property.
- D. Demolition debris is to be collected and containerized.
- E. Contractor to inspect the entire work area, including the grounds immediately around the building on a daily basis and ensure that FOD is not being released. If FOD is found, notify Owner and collect FOD

SECTION 01 7419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

immediately, identify the origin of the material found and describe modifications to work process or procedures necessary to prevent additional FOD release.

3.2 DISPOSAL OF WASTE

- A. General: Remove waste materials from project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Remove waste materials from Owner's property and legally dispose of them.
- D. Containers: All debris is to be collected, stored and transported in an enclosed container.

END OF SECTION 01 7419

SECTION 01 7700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 specification sections apply to this section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Section 01 7300 "Execution" for progress cleaning of Project site.

1.3 CLOSEOUT SUBMITTALS

- A. Certificates of Release from authorities having jurisdiction.
- B. Certificate of Insurance for continuing coverage.

1.4 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 5 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 00 and 01 sections, including project record documents, operation and maintenance manuals, final completion construction photos, damage or settlement surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Sections, including specific warranties, bonds, maintenance service agreements, final certifications, and similar documents.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 5 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Complete final cleaning requirements, including touchup painting.
 - 3. Repair and restore marred exposed finishes to eliminate visual defects.
 - 4. Complete Owner training.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 5 days prior to date the work will be completed and ready for inspection. On receipt of request, Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner's Representative will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect/Engineer that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

SECTION 01 7700 - CLOSEOUT PROCEDURES

2. Results of completed inspection will form the basis of requirements for final completion.

1.5 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
 1. Submit a final Application for Payment according the General Conditions.
 2. Certified List of Incomplete Items: Submit certified copy of Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect/Engineer. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Other forms and certificates required by the Contract Documents.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Owner's Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.6 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1.7 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Owner for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Utilize professional cleaning service with personnel qualified and experienced in cleaning building components and systems used in the project. Clean each surface or unit to condition expected for new commercial building standard.
 1. Remove labels that are not permanent
 2. Wipe surfaces of mechanical and electrical equipment.
 3. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 4. Clean light fixtures, lamps, and reflectors to function with full efficiency.
- C. Clean project site, yard, and grounds, in all areas disturbed by construction activities.
- D. Sweep paved and concrete slab areas broom clean. Remove spills, stains, and other foreign deposits.

SECTION 01 7700 - CLOSEOUT PROCEDURES

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.

 - 2. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

END OF SECTION 01 7700

SECTION 01 7823 - OPERATION AND MAINTENANCE DATA

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. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation manuals for systems and equipment.
 - 2. Product maintenance manuals.
 - 3. Systems and equipment maintenance manuals.

1.3 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual specification sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Where applicable, clarify and update reviewed manual content to correspond to modifications, field conditions, and record drawings and specifications.
- B. Format: Submit operations and maintenance manuals in the following formats:
 - 1. PDF electronic file. Assemble into a single composite manual with electronically-indexed file. Submit on digital media acceptable to the Owner.
 - a. Name each indexed document file in composite electronic index with applicable item name.
 - b. Enable inserted reviewer comments on draft submittals.
 - 2. Two paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Owner will return one copy.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 7 days before commencing demonstration and training. Prior to demonstration and testing, Owner will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 7 days before commencing demonstration and training. Owner will return copy with comments.
 - 1. Correct or modify each manual to comply with Owner's comments and submit corrected manuals prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 REQUIREMENTS FOR OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual by discipline (architectural, structural, mechanical, and electrical) and into a separate section for each system or piece of equipment not part of a system. Each manual shall contain the following materials:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Date of submittal.
 - 4. Name and contact information for applicable Contractor and subcontractors.
 - 5. Names and contact information for Architect and consultants to the Architect that designed the systems contained in the manuals.
 - 6. Cross-reference to related systems in other operation and maintenance manuals.

SECTION 01 7823 - OPERATION AND MAINTENANCE DATA

- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to specification section number.
 - D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system and equipment.
 - E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
 - 1. Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. Enable bookmarking of individual documents based upon file names and configure electronic manual to display bookmark panel upon opening file.
 - F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
 - 1. Binders: Heavy-duty, 3-ring, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
 - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 - 3. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
 - 4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.
- 2.2 OPERATION MANUALS
- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 - 1. System and equipment descriptions.
 - 2. Performance and design criteria if Contractor is delegated design responsibility.
 - 3. Operating standards and procedures.
 - 4. Operating logs.
 - 5. Wiring and control diagrams.
 - 6. Piped system diagrams.
 - 7. Precautions against improper use.
 - 8. License requirements including inspection and renewal dates.
 - B. Descriptions: Include the following:
 - 1. Product name and model number as indicated on Contract Documents.
 - 2. Manufacturer's name.
 - 3. Equipment identification with serial number of each component.
 - 4. Equipment function and operating characteristics.
 - 5. Performance curves and limiting conditions.
 - 6. Engineering data and tests.
 - 7. Complete nomenclature and number of replacement parts.
 - C. Operating Procedures: Include the following, as applicable:
 - 1. Startup procedures.

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2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping including normal shutdown instructions.
 6. Seasonal operating instructions.
 7. Required sequences for electric or electronic systems.
 8. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.
- 2.3 PRODUCT MAINTENANCE MANUALS
- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
1. Product name, model number, color, and similar identifying information.
 2. Manufacturer's name.
 3. Material and chemical composition.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and sources of materials.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds. Include procedures to follow and required notifications for warranty claims.
- 2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS
- A. Content: For each system and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
1. Standard maintenance instructions and bulletins.

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2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and sources of maintenance materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the contract documents. Identify data applicable to the Work and delete references to information not applicable.
1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record drawings to ensure correct illustration of completed installation.
1. Do not use original project record documents as part of operation and maintenance manuals.
 2. Comply with requirements of newly prepared record Drawings in Division 1 Section "Project Record Documents."
- E. Comply with Division 1 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 7823

SECTION 01 7839 - PROJECT RECORD DOCUMENTS

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. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Sections:
 - 1. Division 1 Sections as applicable.
 - 2. Divisions 2 through 41 Sections for specific requirements for project record documents of the Work in those Sections.

1.3 SUBMITTALS

- A. Record Documents: Maintain one paper copy set of marked-up record prints and specifications for interim and final submittals.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Maintain one set of marked-up paper copies of the Contract Drawings including Shop Drawings at a location on-site approved by the Owner.
 - 1. Neatly mark record prints in red font to show the actual installation where installation varies from that shown originally.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in neat, straight lines acceptable to the Owner.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding photographic documentation.
 - 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations.
 - d. Revisions to routing of piping and conduits.
 - e. Revisions to electrical circuitry.
 - f. Actual equipment locations.
 - g. Duct size and routing.
 - h. Locations of concealed internal utilities.
 - i. Changes made through Request for Proposal or Construction Change Directive.
 - j. Changes made following Request for Information or Owner's written directive.
 - k. Details not on the original Contract Drawings.
 - 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Utilize personnel proficient at recording graphic information in production of marked-up prints.
 - 4. Mark record sets with red-colored ink or pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - 6. Note Construction Change Directive numbers, Request for Proposal numbers, and similar identification, where applicable.

SECTION 01 7839 - PROJECT RECORD DOCUMENTS

2.2 RECORD SPECIFICATIONS

- A. Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether record product data has been submitted in operation and maintenance manuals.
 - 5. Note related Change Orders and record drawings where applicable.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Store record documents at a location approved by the Owner and apart from the Contract Documents used for construction. Do not use record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition. Provide access to project record documents for Owner's reference during normal working hours. Owner may require updated record documents as a condition of authorizing Progress Payments.

END OF SECTION 01 7839

SECTION 01 7900 - DEMONSTRATION AND TRAINING

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. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems and equipment.
 - 2. Training in operation and maintenance of systems and equipment.
- B. Related Sections:
 - 1. Divisions 2 through 41 sections for specific requirements for demonstration and training for products in those Sections.

1.3 SUBMITTALS

- A. Submit outline of instructional program for demonstration and training, including a list of training modules and manufacturer-produced video recordings and a schedule of proposed dates, times, length of instruction time, and instructors' names and qualifications for each training module. Include learning objective and outline for each training module.

1.4 QUALITY ASSURANCE

- A. Trainer Qualifications: An individual experienced in training maintenance personnel in a training program similar in content and extent to that indicated for this project, and whose work has resulted in training or education with a record of successful learning performance.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved operation and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by the Owner.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and piece of equipment as required by individual specification sections.
- B. Training Modules: Develop a teaching outline for each module that includes objectives and specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
 - 1. Documentation: Review the following items in detail:
 - a. Operations and Maintenance manuals.
 - b. Project record documents.
 - c. Warranties and bonds.
 - d. Maintenance service agreements and similar continuing commitments.
 - 2. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping or shutdown for each type of emergency.
 - c. Operating instructions for conditions outside of normal operating limits.
 - d. Sequences for electric or electronic systems.

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- e. Special operating instructions and procedures.
- 3. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Normal shutdown instructions.
 - g. Special operating instructions including seasonal operations.
- 4. Adjustments: Include the following:
 - a. Alignments and checking adjustments.
 - b. Noise and vibration adjustments.
 - c. Economy and efficiency adjustments.
- 5. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
- 6. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive and routine maintenance.
 - f. Instruction on use of special tools.
- 7. Repairs: Include the following:
 - a. Diagnosis and repair instructions.
 - b. Disassembly; component removal, repair, and reassembly instructions.
 - c. Instructions for identifying parts and components.
 - d. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Division 1 Section "Operations and Maintenance Data."
- B. Set up instructional equipment at instruction location approved by Owner.

3.2 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems and equipment.
 - 1. Owner will furnish Contractor with names and positions of participants.

END OF SECTION 01 7900

ITEM D-701 STORM DRAINS AND CULVERTS

DESCRIPTION

701-1.1 This item shall consist of the construction of pipe culverts, valves, end sections, flapper gate repairs and lift system, and debris screen, including all fittings, joint restraints, connections, transitions, bedding, trench shoring and bracing, cleaning and testing and all other items necessary for a complete installation as well as demolition and disposal of existing pipe and appurtenances according to these Specifications and in reasonably close conformity with the lines and grades shown on the Plans.

701-1.2 Lowering the level of the float plane pond water level, maintaining that level throughout the Work and all associated Work including operating the existing valve, monitoring tides and weather, installation of a pond water level elevation board and other miscellaneous tasks and appurtenant materials as described in the Sequence of Construction, shown in the Plans shall be a requirement of this section.

701-1.3 Development of an approved Work Plan as described in the Sequence of Construction shall be an incidental requirement of this Section.

701-1.4 This section shall include only the pipe construction and connections to be directly buried or installed within the concrete vault. Fabrication and installation of HDPE pipe used in sliplining shall be provided as a requirement of Section D-711 and installed as described therein.

MATERIALS

701-2.1 Materials shall meet the requirements shown on the Plans and specified below.

701-2.2 PIPE. High Density Polyethylene Pipe (HDPE) and fittings shall be manufactured in accordance with AWWA C906. HDPE shall be manufactured from PE4710 polyethylene compounds that meet or exceed the following:

- a. ASTM D3350 Cell Classification 445574.
- b. HDPE pipe and fitting material compound shall contain color and ultraviolet (UV) stabilizer meeting or exceeding the requirements of Code C per ASTM D3350.
- c. HDPE pipe shall be SDR 21 unless otherwise noted.

HDPE fittings shall be PE4710 with the cell classification noted above. Fittings shall be molded unless otherwise approved by the engineer with pressure ratings at a minimum equal to that of the pipe. Fittings shall be butt fusion type unless otherwise noted on the plans or approved by the Engineer. Electro-fusion connections are allowed where shown on the Plans and elsewhere on a limited basis upon Engineer approval. Fittings and connections shall conform to the following:

- a. Butt fusion fittings shall meet ASTM D3261
- b. Electro-fusion fittings shall meet ASTM F1055
- c. Socket fittings are not permitted.

Flanged pipe connections shall be PE 4710, with a minimum Cell Classification as noted above. Flanges shall conform to ASTM D 3261 or ASTM F 2206 as applicable. Flanges shall have a pressure rating equal to the pipe unless otherwise specified on the plans. Markings for molded or machined flanges shall be per ASTM D 3261. Fabricated flange adapters shall be per ASTM F 2206.

- a. Backup rings shall be ASTM A182 316 stainless steel, ASTM A351 CF8M, or ASTM A536 ductile iron with polypropylene encapsulation or hot dip galvanized coating unless otherwise noted in the Plans. Bolt-holes and bolt-circles shall conform to one of these standards: ASME B-16.5 Class 150, ASME B-16.47 Series A Class 150, or AWWA C207 Class 150 Series B, D, or E. The back-up ring shall provide a long-term pressure rating equal to the pressure class of the pipe or 150 psi, whichever is greater. The applicable specification of manufacture, the material designation, and the pressure class or SDR rating shall be clearly marked on the back-up ring.
- b. Bolts, nuts and washers for all flanged joints shall be stainless steel conforming to ASTM A193 and ASTM A194 Grade B8M CL 1 or higher as recommended by the manufacturer. Washers are required between the nut and the backup ring and shall be SS316.

701-2.3 BEDDING. Use the following material:

- a. Suitable material as defined in specification subsection P-209 Crushed Aggregate Base Course.

701-2.4 BACKFILL. Use the following material:

- a. Suitable material as defined in specification subsection P-154 Subbase Course.

701-2.5 36-INCH VALVE ASSEMBLY AND ACTUATOR. Use the following material:

- a. Valve shall be a 36-inch Dezurik BAW AWA C504 Rubber seated butterfly valve or approved equal as follows:
 1. BAW,36,F1,DI,NBRN-NBR,150B,DI-S1,BAA-S30SD0*X,SB16 Modified
 2. BAW: Style - DeZURIK AWWA C504 Rubber-Seated Butterfly Valve
 3. 36: Size - 36 Inch (900mm)
 4. F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150
 5. DI: Body Material - Ductile Iron, ASTM A536 Grade 65-45-12
 6. NBRN: Packing - NBR (Acrylonitrile-Butadiene), Self-Adjusting Multiple V-Ring; -20 to 180°F (-29 to 82°C)
 7. NBR: Seat Material - NBR (Acrylonitrile-Butadiene); -20 to 180°F (-29 to 82°C)
 8. 150B: Service Class - AWWA Class 150B
 9. DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 (3" - 24" (80- 600mm) Class 150B/250B, 28" - 72" (700-1800mm) Class 25A, 75B & 150B & 28" - 48" (800-1200mm) Class 250B) and Grade 80-55-06 (54" - 72" (1400-1800mm) Class 250B), Type 316 Stainless Steel Seating Edge (3" - 20" (80-500mm) =ASTM A276, 24" and larger (600mm & larger) - ASTM A240)
 10. S1: Shaft - 304 Stainless Steel, ASTM A276
 11. Coating or Paint: S30SD0 - 8 mils minimum (non-stainless steel parts) of Blue DeZURIK Epoxy (NSF Std. 61) on Interior and Standard (SP10) surface prep AND 12 mils minimum (nonstainless steel parts) of Blue DeZURIK Epoxy (NSF Std. 61) on Exterior and Standard (SP10) surface prep
 12. BAA: Option - Conform to Buy American Act (BAA041 U.S.C. 10a - 10d) American Content
 13. X: Actuator Type - AUMA Electric actuator,
 14. SB16: Accessories - 316 Stainless Steel Bolting
- b. Actuator shall be AUMA SAEX10.2/GS125.3/AMEXC01.1, 240/3/60/, 58 second open/close time, local open/stop/close pushbuttons, handwheel override, local/off/remote, CSA Explosion proof enclosure, NEMA4/6, FM div 1, Class I grp C,D; Class II Grp E,F,G; Class III T4 or approved equal.

- c. Valve and actuator shall be Buy-America compliant unless otherwise waived by the Engineer for the actuator through appropriate channels as described herein. The actuator listed above is approved for use on this project. Proposed substitutions shall be compliant or waived as follows:
1. Contractor to prepare Buy America Waiver for valve actuator and submit to JNU Project Engineer for FAA approval.
 2. The Contractor shall provide all information to complete the Waiver request including, but not limited to, manufacturer/supplier quote with American percentage calculation worksheet and certify that the steel is 100% U.S. origin. Small amounts of steel that are used in components and subcomponents, that are not structural steel, may be of foreign origin. This would typically consist of nuts, bolts, and clips. For these types of steel, the manufacturer must indicate the use of the steel (nuts, bolts, clips, etc.) and must count this steel as non-U.S. origin when completing the Content Percentage Calculation Form.
 3. The Criteria for a Buy American Waiver appears to be a Type III for the actuator based upon FAA Order 5100.38D, Dated 30 September 2014, Table Y-2, pg. 522. Per 49 USC § 50101(b)(2) (To be verified with manufacture)
 4. A Type III Waiver Percentage Calculation Worksheet Example Form is as follows:

Company		Juneau International Airport (JIA)				Date:			
Point of Contact (Provide address, telephone, fax, e-mail)		Ken Nichols 1873 Shell Simmons Dr. Ste. 200, Juneau, AK 99801 (907) 789-7821 Ken.Nichols@jnuaairport.com							
PRODUCT STRUCTURE Multi-Level Bill of Materials through level 2 only		Item: Butterfly Valve W/Electric Actuator FAA Item Number							
Address of Final Assembly Location: 1873 Shell Simmons Drive, Juneau, AK 99801				Total Material Cost: \$					
				US Content, % ¹					
				Other, %					
Level (0, 1, 2)	Part Number	Description ²	Quantity Per Unit	Unit of Measure	Price/Unit of Measure	US Origin*		Other	
						Price/Unit of Measure	Cost/Each	Price/Unit of Measure	Cost/Each
		Butterfly Valve W/Electric Actuator			1	lump sum			
							\$ -		\$ -

Items Listed in Federal Acquisition Regulation Part 25.104 may be counted as US Origin, however should include note stating that item is exempt in 25.104

701-2.6 METALS. Use the following material:

All materials for metal fabrication shall conform to the Contract Documents and as shown on the Plans. Submit Fabrication Shop Drawings of all fabricated steel and aluminum items prior to fabrication. Purchase orders shall contain all necessary information to verify that materials purchased comply with the fore mentioned documents. The Fabricator shall inspect all materials, upon arrival, for conformance with the purchase orders. The Fabricator shall confirm that mill certificates and test reports are provided and that they correctly identify the materials delivered. If a supplier proposes a substitute for any material, the proposed substitution shall be submitted to the ENGINEER for approval prior to commencing any WORK involving use of the proposed substitute material. Supplier must be prepared to supply materials as identified on the design documents if the proposal for a substitution is not approved by the ENGINEER.

- a. All miscellaneous steel shapes and plate steel shall be ASTM A36, hot-dip galvanized, unless otherwise noted.
- b. Square and rectangular HSS shall be ASTM A500, Grade B, hot-dip galvanized, unless otherwise noted.
- c. Bolts and Miscellaneous Hardware: Unless otherwise noted, all bolts shall be ASTM A307, hot-dip galvanized. Washers are required under both the head and nut of all bolts, unless otherwise noted. All nuts and washers shall be hot-dip galvanized. All bolts called out as ASTM A325 shall be hot-dip galvanized. A325 bolts shall be installed per AISC turn-of-nut method, or other ENGINEER approved method, unless otherwise indicated on the Plans.
- d. All bolts, nuts, washers, screws, and miscellaneous hardware called out as Stainless Steel shall be Type 316 Stainless Steel conforming to ASTM F593 and F594 as applicable.
- e. All nails shall be hot-dip galvanized.
- f. Unless otherwise noted, all steel shall be hot-dip galvanized in accordance with ASTM A123 or A153 as appropriate.
- g. Comply with applicable provisions of AWS D1.1 Structural Welding Code - Steel, current edition.

CONSTRUCTION METHODS

701-3.1 EXCAVATION. Excavations for pipe shall be performed in accordance with the temporary excavation plan as shown in the Plans.

Where rock, hardpan, or other unyielding material is encountered, the Contractor shall remove it from below the foundation grade for a depth of at least 12 inches or 1/2 inch for each foot of fill over the top of the pipe (whichever is greater) but for no more than 75% of the nominal diameter of the pipe. The width of the excavation shall be at least 1 foot greater than the horizontal outside diameter of the pipe. The excavation below grade shall be backfilled with selected fine compressible material, such as silty clay or loam, and lightly compacted in layers not over 6 inches in uncompacted depth to form a uniform but yielding foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with bedding material for the full trench width. The Engineer shall determine the depth of removal necessary. The bedding material shall be compacted to provide adequate support for the pipe.

The excavation for pipes that are placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the pipe as shown on the Plans.

701-3.2 BEDDING. Install bedding around pipes as shown in the Plans. Compact all bedding to 95% of the maximum density determined by ATM 207 or ATM 212.

701-3.3 PIPE INSTALLATION. The HDPE pipe and fittings shall be joined using butt fusion unless otherwise specified in the Plans or approved by the Engineer. The pipe shall be joined by the butt fusion procedure described in ASTM F 2620-13. All fusion joints shall be made by certified technicians in compliance with the recommendations of both the pipe manufacturer and the fusion machine manufacturer. The Contractor shall submit a certificate of fitness issued in accordance with 49 CFR 192.285 by an appropriate agency for each technician prior to beginning fusion operations.

The fusion machine shall be equipped with a data-logger to record the fusion process for each joint. The report for each joint will provide all information required for the Engineer to determine the acceptability of the joint in accordance with the ASTM standard, including the temperature of the heating plate measured at four quadrants on each side of the plate. Each joint shall be externally marked with a unique identifier that will allow the joint to be matched with its corresponding data. The data shall be provided to the Engineer at the end of each day of fusing. The Engineer will analyze the data-logger report within 24 hours of receipt of the report for acceptance in accordance with the ASTM standard. Joints rejected by the Engineer for non-compliance with the ASTM standard will be removed and replaced by the Contractor

at no cost to the Owner. Joints accepted by the Engineer on the basis of the ASTM standard that fail visual leak inspections will be removed and replaced by the Contractor at no cost to the Owner.

Electro-fusion joining shall be done in accordance with the manufacturer's recommended procedure and ASTM F 1290. The electro-fusion transformer unit shall be the type capable of reading the electronic barcode associated with each fitting and storing the fuse input and result information electronically. The Contractor shall maintain the data recorded by the electro-fusion unit throughout the warranty period of the Work. This information shall be provided to the Engineer upon request. Electro-fusion joints shall be made by a qualified technician.

Flange joint connections shall be made in accordance AWWA M55 and AWWA C600. Joints shall be fully restrained. Align and center the flange adapter relative to the pipe. Flanges shall be square with the receiving valve or other flange before tightening of bolts. Bolts shall not be used to draw flanges into alignment. Bolt threads shall be lubricated, and flat washers shall be used under flange nuts. Bolts shall be tightened in accordance with the manufacturer's recommendations. The final tightening torque shall be as indicated by the manufacturer.

Valve and actuator shall be installed per manufacturer's instructions. Actuator shall be electrically connected in accordance with the manufacturer's instructions and the L Series Specifications.

701-3.4 TESTING. Joints and flange connections inside of the vault shall be visually inspected by the Engineer

Valve seat shall be tested by closing the valve at low tide and observing the downstream end of the pipe for running water.

701-3.5 BACKFILLING. Pipes shall be inspected before any backfill is placed; any pipes found to be out of alignment, unduly settled, or damaged shall be removed and relaid or replaced at the Contractor's expense.

Construct the backfill according to the material and construction requirements of the specifications for the applicable lift of material.

When the top of the pipe is even with or below the top of the trench, the backfill shall be compacted in layers not exceeding 6 inches on both sides of the pipe and shall be brought up 1 foot above the top of the pipe or to natural ground level, whichever is greater. Care shall be exercised to thoroughly compact the backfill material under the haunches of the pipe without displacing the pipe. Material shall be brought up evenly on both sides of the pipe for the full length of the pipe.

When the top of the pipe is above the top of the trench, the backfill shall be compacted in layers not exceeding 6 inches and shall be brought up evenly on both sides of the pipe to 1 foot above the top of the pipe. The width of backfill on each side of the pipe for the portion above the top of the trench shall be equal to twice the pipe's diameter or 12 feet, whichever is less.

All backfill shall be compacted to the density required under Item P-152.

It shall be the Contractor's responsibility to protect installed pipes and culverts from damage due to construction equipment operations. The Contractor shall be responsible for installation of any extra strutting or backfill required to protect pipes from the construction equipment.

701-3.6 METAL FABRICATION

Fabricate and assemble components in a shop, to greatest extent possible. Workmanship and finish shall be equal to the best industry standards and in accordance with the requirements of AWS, AISC, and The Aluminum Association, as applicable.

All holes required for steel hot-dip galvanizing shall be clearly identified on the Shop Fabrication Drawings for ENGINEER review and approval. Fabricator shall coordinate with Galvanizer to determine size and quantity of holes required. Some, or all of the holes, may be required to be fully repaired per AWS D 1.1, at the discretion of the ENGINEER.

Galvanized coatings damaged due to fabrication, welding, material handling or occurring during installation shall be repaired by using the following hot-applied repair stick method:

- a. Repair sticks shall be zinc-cadmium alloys (melting point 518° - 527°F) such as “Rev-Galv”, or zinc-tin-lead alloys (melting point 446° - 600°F) such as “Galv-Weld”, “Zilt”, and “Galv-over”. The zinc-tin -lead alloys shall comply with U.S. Federal Specification O-G-93 and contain fluxing agents.
- b. Remove welding slag by chipping hammer and clean weld or damaged area by vigorous wire brushing.
- c. Preheat the region to be repaired by means of an oxyacetylene torch or other convenient method to between 600°F and 750°F. The alloys do not spread well at temperatures lower than 600°F. Also as temperatures rise above 600°F increasing amounts of dross form.
- d. Wire brush surface again.
- e. Apply coating by rubbing bar of the alloy over the heated surface while it is hot enough to melt the alloy.
- f. Spread the molten alloy by briskly wire brushing or rubbing with a flat edge strip of steel or palette knife. Minimum thickness of applied zinc stick material shall be 12 mils.
- g. Remove flux residues by wiping with a damp cloth or rinsing with water.
- h. Brush apply two top coats of zinc rich paint, ZRC or equal (cold galvanize repair).

METHOD OF MEASUREMENT

701-4.1 Measurement for all items in this section, shall be based upon the completion of the entire WORK as a Lump Sum Pay Unit, complete, all in accordance with the requirements of the Contract Documents.

701-4.2 Excavations and backfilling performed for pipe and vault shall not be included in Lump Sum pay items in this Section, but shall be measured and paid in accordance with Section P-152 or P-154 as applicable.

701-4.3 Removal items shall include all work to remove and dispose items as designated on the plans at a Contractor provided disposal site.

701-4.4 Development of a Work Plan to be submitted and approved by the Engineer prior to beginning the Work as described in the Sequence of Construction shown in the Plans shall not be measured directly for payment, but shall be considered incidental to the Work.

BASIS OF PAYMENT

701-5.1 Payment for this Work shall be made at the contract lump sum price and shall constitute full payment for all Work described in this section, as shown in the plans and as directed by the Engineer.

Payment will be made under:

- Item D-701a 36-inch Valve Assembly with Actuator – Lump Sum
- Item D-701b.1 Flapper Gate Repairs and Lift System – Lump Sum
- Item D-701c.1 Steel Debris Screen – Lump Sum
- Item D-701d 36-Inch HDPE Buried Pipe and Vault Connections – Lump Sum
- Item D-701e Remove 48-inch CMP Pipe – Lump Sum
- Item D-701f.1 Remove Debris Screen – Lump Sum
- Item D-701g Lower Float Pond Water Level and Maintain – Lump Sum

ITEM D-710 EXCAVATION DEWATERING

DESCRIPTION

710.1 The Work under this Section consists of providing tools, materials, labor and equipment to perform operations pertaining to the dewatering of trenches, excavations and other Work areas or diversion of surface and subsurface water flows during construction operations in accordance with the Alaska Department of Environmental Conservation Construction General Permit (CGP) and the Excavation Dewatering Permit (EDP). The Contractor shall conduct Work in accordance the CGP and the EDP. The Contractor shall file a Notice of Intent associated with the appropriate permit as required by Law.

MATERIALS

710.2 This project is expected to disturb less than one acre, and require discharge of excavation water to waters of the US. It is expected that the EDP but not a CGP will apply to this project. The Excavation dewatering permit is described as follows:

EXCAVATION DEWATERING PERMIT (EDP). The permit authorizing storm water discharges from excavations during construction under, issued and enforced by DEC under certain circumstances. Dewatering discharges eligible for coverage under this general permit consist of water pumped from excavation areas through the use of temporary dewatering wells or submersible pumps to lower the water table to support a construction activity. The dewatering of accumulated groundwater and storm water that accumulates within an excavation area is an authorized discharge under the permit. The permit does provide discharge authorization for dewatering conducted within 1,500 feet of a permit defined "DEC-identified contaminated site" although special permit conditions apply and additional requirements may be added in the discharge authorization. The special conditions will provide assurance that the dewatering activities does not pull contamination from known contaminated sites. The EDP document can be found online at:

http://dec.alaska.gov/water/wnpssc/stormwater/docs/AKG002000_Excavation_Dewatering_GP.pdf

- a. A minimum of 14 days prior to submitting a Notice of Intent to ADEC for the CGP or EDP, the Contractor shall prepare and submit to the Engineer for Approval a Dewatering Plan inclusive of the Best Management Practice (BMP) Plan as required by the EDP, detailing materials and equipment, mobilization, operation, maintenance, pumping facilities, piping, and other appurtenant operations or materials to be used in dewatering operations. The proposed plan shall describe the work and the Contractors methods to remain in compliance with ADEC regulations.
- b. Plan shall be location and task specific and shall consider schedule, traffic, nearby public and private utilities and structures, shoring of trenches and nearby structures, other bypass pumping operations occurring simultaneously, redundancy of dewatering equipment, sampling and testing of removed water, erosion and sediment control, and control measures (BMP's) provided in accordance with ADEC regulations.
- c. The Dewatering Plan shall be included with to the Construction Work Plan submittal and shall reference appropriate sections of that Plan. Reference the Sequence of Construction on Sheet C1 of the Plans.

CONSTRUCTION METHODS

710.3 All construction requirements for design, installation, and operation of dewatering systems shall comply with current safety and environmental regulations.

Acceptance of Contractor's SWPPP or BMP Plan by the Engineer shall not relieve Contractor of responsibility for the exercise of reasonable precaution, sound engineering judgment, prudent construction practices, overloading or misuse of existing or new structures, the adequacy and safety of such Works, and potential damage or undermining of existing or completed Works.

Records of the Work shall be maintained in accordance with the CGP or EDP and submitted to ADEC as applicable.

Contractor shall provide disposal site for excess water and shall be responsible for securing all necessary permits and approvals. Contractor shall provide copies of permits and approvals to the Engineer.

METHOD OF MEASUREMENT

710.4 Measurement for all Excavation Dewatering, including that required for trenches and for general excavations, shall be measured based upon the completion of the entire work as a Lump Sum Pay Unit, complete, all in accordance with the contract documents.

The preparation and submittal of an approved Dewatering Plan, and BMP Plan all requirements thereof including eNOI and eNOT with ADEC, maintenance of BMPs, sampling of excavation water, reporting and all tasks listed in the EDP shall be included in Excavation Dewatering.

BASIS OF PAYMENT

Payment for this Work shall be made at the contract lump sum price and shall constitute full payment for all Work described in this section, including maintenance activities.

Payment shall be made under

Item D-710a Excavation Dewatering and Stabilization - Lump Sum

ITEM D-711 SLIPLINING

DESCRIPTION

711-1.1 Where indicated on the drawings, perform sliplining of existing 48-inch Aluminum CMP pipe and CPEP pipe, with high density polyethylene liner pipe. The Contractor shall furnish all labor, materials, and equipment for doing the work including sewer line cleaning, insertion pit excavation and backfilling and pipe installation.

711-1.2 DEFINITIONS

- a. **Sliplining:** A pipe rehabilitation process that involves the insertion of a new pipe of smaller diameter into an existing pipe.
- b. **Host Pipe:** The original existing old pipe that will be rehabilitated with the sliplining process.
- c. **Product Pipe:** The new pipe that is inserted into the host pipe. This is also called the liner pipe or the carrier pipe.
- d. **Insertion Head:** Fabricated component attached to the front of the product pipe. The insertion head is the first part of the product pipe to enter the host pipe and is used to prevent the product pipe from catching on pipe joints, minor deflections, and minor protrusion in the interior of the host pipe during insertion.
- e. **Slipline Pit:** The pit where the sliplining begins or ends.
- f. **Annular Space:** The space or gap between the product pipe and the host pipe.
- g. **Springline:** Mid-point or halfway up the pipe cross-section where the pipe is at its maximum horizontal dimension or defined as the mid-point between the pipe invert and pipe crown.
- h. **Tie-in:** A location where the newly installed product pipe is tied into the existing pipe.
- i. **Pipe Joint:** One individual section of the segmented pipe with a bell at one end and spigot at the other end or with two field cut ends or spigots if a coupling is used to join the pipe joint.

MATERIALS

711-2.1 HIGH DENSITY POLYETHYLENE LINER PIPE. High Density Polyethylene Pipe (HDPE) and fittings shall be per Section D-701.

711-2.2 SUBMITTALS. Submit the following for review and approval by the Engineer:

- a. Contractor Sliplining and Pipe Insertion Work Plan. Prior to construction and 30 days before beginning sliplining work, the Contractor shall prepare and submit to Engineer a work plan that that shall include:
 - (1) Detailed written description of the proposed equipment and methods.
 - (2) Description of the proposed insertion method.
 - (3) Shop drawings for insertion head.

CONSTRUCTION REQUIREMENTS

711-3.1 GENERAL. All HDPE pipe shall be cut, fabricated, and installed in conformance with the pipe manufacturer's recommendations. Installation of the HDPE pipe shall conform to this Specification and to the most recent versions of ASTM F 585-13, D 2657-07, and D 2321-14e1.

711-3.2 FLOW CONTROL. The Contractor shall plug the flow from the float pond as described on the drawings.

711-3.3 HOST PIPE CLEANING AND PROOFING. Clean the host pipe in accordance with Section 713. The cleaning work shall be accomplished as necessary to remove rocks, gravel, sand, and mineralization deposits on the pipe wall. No debris larger than 0.5-inch in diameter will be allowed to remain in the host pipe. The contractor shall pull a sizing or proofing pig through the host pipeline prior to insertion of the liner pipe to verify adequate clearance is available to insert the HDPE liner and no significant deflections or offset joints exist that could adversely affect the sliplining insertion work. The sizing pig shall be a section of the proposed HDPE liner pipe. The sizing pig shall be no less than 3-pipe diameters in length. It shall be fitted with a pulling head and pulling cable on both ends and pulling ropes or cables on the front and back so the pig can be pulled forward and also retrieved backward if it becomes jammed in the host pipe. The Contractor shall be responsible for all costs incurred in retrieving the proofing liner if it becomes stuck and cannot be retrieved with the pulling cables or ropes. The host pipe shall be considered ready for sliplining when, after successfully proofing the entire host pipe for the area to be sliplined, the proofing liner shows no evidence of excessive cuts, kinks, gouges or other damage. If unacceptable debris is observed during the pigging and proofing the Contractor shall perform additional cleaning and pigging additional manual inspection at no extra cost to the Owner

The Contractor shall notify the Engineer immediately, if inspection or pigging reveals an obstruction that will restrict insertion of the HDPE liner and cannot be removed by conventional sewer cleaning equipment.

711-3.4 HDPE PIPE INSPECTION. Pipe should be inspected for damage immediately prior to joining. Damage will consist of gouging on the outside surface extending to more than 10 percent of the wall thickness in depth; kinking due to excessive bending; flattening amounting to more than 5 percent of the original diameter; any abrasion or cutting of the inside surface. Damaged portions shall be cut out and discarded and the pipe rejoined.

711-3.5 HDPE PIPE JOINING. Joining of HDPE pipe to HDPE pipe shall be accomplished by butt fusion performed in accordance with the pipe manufacturer's recommendations. The location of fusing to assemble the HDPE pipe shall within the excavation limits shown on the drawings. If necessary, the Contractor shall provide shelter appropriate to protect the joining operation from rain, wind, and sea spray

711-3.6 HDPE PIPE TESTING. A bent strap field-test in accordance with ASTM F 2620 shall be performed on an initial fusion joint to establish a baseline for a proper and acceptable HDPE joint fusion process. Additional bent strap field-tests will also be required if there is a change in the fusion equipment operator or a change in the fusion equipment. At the discretion of the Engineer, additional bent strap tests may be required. At a minimum, perform one bent strap field-test per 10 fusion joints assembled on the project. Any disbondment indicates poor fusion quality and will be unacceptable. Changes in the fusion process shall be made and a new trial fusion and bent strap test shall be performed. Fusion of joints shall not proceed until a test joint passes the bend strap test.

711-3.7 INSERTION PITS. An insertion pit shall be excavated where the HDPE pipe is to be inserted into the host pipe. The insertion pit shall be excavated with the slopes shown on the Contract Drawings. The pit shall be adequately shored, braced, and dewatered to ensure safe work area.

711-3.8 PIPE INSERTION. The liner pipe may be either pulled or pushed into the existing host pipe or a combination of both methods may be used.

The crown of the host pipe in the pit or the entire host pipe in the pit shall be removed to facilitate insertion of the liner. All sharp edges that could potentially damage the liner pipe shall be removed from the host pipe opening.

A power winch shall be connected to the end of the liner pipe by a cable and pulling head or other proven and acceptable arrangement to pull the liner into the host pipe. Length of the liner pipe to be pulled and pulling speed shall be in accordance with the manufacturer's recommendations to ensure the liner is not excessively stretched. Pulling speed shall not exceed 1 foot per second. Butt fused joints shall not be pulled until the set time has elapsed.

The Contractor shall not stretch the HDPE pipe beyond its elastic limit in the event of a hang-up.

After insertion, the manufacturer's recommendations shall be followed regarding relaxation of the liner prior to grouting. The Contractor shall allow the liner to return to its original length and shape in the unstressed state and then trim the excess liner as needed. The liner manufacturer's recommendations shall be followed regarding the relief and normalization of stress and strain due to temporary stretching after pulling operations are completed. Time allowed for stress and strain relief shall not be less than 24 hours.

Fill the annular space with grout as described Section 712. The liner pipe shall be filled with water during the grouting process. Grout shall not be placed in the annular space until normalization of the liner has taken place.

At all points where the HDPE liner pipe is exposed, remove all debris and bed and backfill around the pipe as shown on the drawings.

711-3.9 FINAL ACCEPTANCE. The final acceptance for the HDPE liner will be based on visual inspection of the slipline pipe.

METHOD OF MEASUREMENT

711-4.1 Measurement for sliplining will be for actual linear footage for product pipe installed in the field and shall be measured between end of pipe to end of pipe.

BASIS OF PAYMENT

711-5.1 Payment for this Work shall constitute full payment for furnishing all materials, and performing the work specified in this Section, including: pipe, pipe fittings, invert mortar work, pipe installation work, manhole connections, storm drain pipe and manhole cleaning and preparation, storm drain flow control, and CCTV inspections. No separate payment will be made for insertion pit excavation and backfill.

Payment will be made under:

Item D-711a Slipline 36-inch (HDPE) - per linear foot

ITEM D-712 ANNULAR SPACE GROUT

DESCRIPTION

712-1.1 This work includes the various requirements of annular space grouting of sliplining rehabilitation systems. The space between the host and liner pipes shall be completely filled with annular space grout to support the liner and provide long-term stability.

712-1.2 QUALIFICATIONS. The Contractor's grouting supervisor shall have a minimum of five (5) years of experience with the design and placement of annular space grout. The grouting supervisor shall have completed successfully at least three projects within the last three years similar to the project described in this specification.

MATERIALS

712-2.1 The grout shall consist of Portland Cement, water, and admixtures as required to meet these specifications. The grout shall possess flow and minimal shrinkage characteristics as specified and permit a flow time adequate to complete the grouting work. The grout shall have the ability to flow freely without stiffening through the annular space in the section being grouted at that time.

The mix shall be designed as follows:

- a. Initial set time shall not be less than 2 hours.
- b. The grout slurry shall have a minimum density of 55 pcf and a maximum density of 61 pcf as per ASTM C 138.
- c. The grout shall have an apparent viscosity not exceeding 18 seconds in accordance with ASTM C 939.
- d. The grout shall have a minimum penetration resistance of 100 psi in 24-hours when tested in accordance with ASTM C 403 and a minimum compressive strength of 300 psi in 28-days when tested in accordance with ASTM C 495.
- e. The maximum shrinkage shall not exceed one percent by volume.
- f. The grout shall not bleed or segregate.
- g. Grout shall be manufactured by Pacific International Grout or approved equal.

712-2.2 SUBMITTALS. Submit the following to the Engineer for review and approval at least 30 days prior to commencing grouting operations:

- a. Product literature and data pertaining to grout mix.
- b. Grout Mix Design.

An AASHTO accredited independent laboratory shall certify the results of the grout mix testing. The testing shall have been conducted within the past 18 months. List all of the materials in the grout mix design providing the proportions and materials certification for each component. The grout mix design shall be approved by the Engineer. The certified mix design shall include the following:

- (1) Initial set time
- (2) Density

- (3) Viscosity
- (4) 24-hour penetration resistance and 28-day compressive strengths.
- (5) Grout working time prior to a 15 percent change in density or viscosity.
- (6) Proposed method for placing grout in the annular space.
- (7) Procedure for maintaining the entire liner pipe completely full of water to prevent floatation of the liner pipe during the grouting process.
- (8) Maximum grouting pressure.
- (9) Pressure gauge certifications.
- (10) Bulkhead and grout injection pipe and vent design and vent pipe size.
- (11) Description of the method to verify that the grout has completely filled the annular space.
- (12) Work plan identifying bulkhead construction, vent tube placement, access pits, method used to maintain the liner pipe full of water to prevent carrier pipe flotation and movement during grouting.

c. Grout supervisor qualifications.

d. Quality Control Submittals.

- (1) Manufacturers certificate of proper installation.
- (2) Test reports including field test reports and independent testing laboratory results for field-drawn samples.

CONSTRUCTION REQUIREMENTS

712-3.1 GENERAL The grouting supervisor is required to be onsite 100% of the time during the annular grout installation work.

Construct grout bulkheads at each end of the sliplined segment. Construct the grout bulkheads with cement, mortar, concrete, injected foam, activated oakum or other similar material. Bulkheads shall be capable of containing the injected grout in the annular space and also withstanding pressures created during the grout injection work. Install vent and drain pipes and primary and secondary grout injection ports in the bulkheads.

To prevent floatation, the entire liner pipe shall be maintained 100% full of water and without trapped air during the grout injection and grout curing process. Maintain the liner pipe full of water for no less than 24 hours after the grout injection work is complete. Provide temporary plugs or dams in the liner pipe to maintain the full-water condition. Plugs may be inflatable rubber plugs or may be a temporary plug or dam structure constructed in the liner pipe by the Contractor. If the temporary plugs or dams leak water and constant pumping of water into the liner pipe is required to maintain a full pipe condition, provide full-time 24-hour personnel to maintain the water flow into the liner pipe and monitor the full-pipe condition. During the grout injection and grout curing process, under no circumstances shall the water level in the liner pipe be allowed to be less than 100% full (by volume) or less than 36-inches of depth of water measured above the new liner pipe invert.

The Contractor shall completely dewater the annular space and remove any debris or deleterious material prior to commencement of grout injection. The annular space shall be filled with grout to no less than 95 percent of the annular space total volume. Any voids left in the final grout shall not exceed 5 percent of the annular space total volume and shall not be uniform or continuous voids that are located in a few areas of the annular space. Allowable voids in the grout shall be non-uniform and dispersed in the annular space.

Collapsing of the liner pipe during the grouting process is unacceptable and will be cause for rejection of the segment. The maximum grout pressure shall not exceed that as recommended by the liner manufacturer. Grouting pressure during the entire procedure shall be monitored and carefully controlled. Venting pipes shall installed at the upstream and downstream bulkheads to prevent the grout from attaining pressures that exceed the liner pipe manufacturer's recommendations.

The grout materials shall be mixed and pumped in equipment of sufficient size and capacity to provide the desired amount of grout for the sliplined pipe segment in a single operation unless otherwise approved by the Engineer. Pumping equipment shall be of a size sufficient to inject grout at a volume, velocity and pressure compatible with the size of the annular space. The equipment shall be capable of mixing the grout at densities required for the approved procedure and shall also be capable of changing densities as dictated by field conditions at any time during the grouting operation. Grout density shall be within two percent of the design density and shall not exceed the maximum specified density at both the injection and the vent points.

Gauges to monitor grout pressure shall be attached immediately adjacent to the injection port. The gauge shall conform to an accuracy of plus or minus 0.5 psi. The range of the gauge shall not be more than 100 percent greater than the design grout pressure. Pressure gauges shall be instrument oil filled and attached to a saddle-type diaphragm seal (gauge saver) to prevent clogging with grout. All gauges shall be certified and calibrated in accordance with ANSI B40, Grade 2A. The grout pressure recordings shall be identified, as a minimum, with the date, batch, and time of day grouting was performed and shall be submitted to the Engineer at the end of the workday that grouting was performed.

Grout placement shall not be terminated until the following conditions are met, unless otherwise approved by the Engineer:

- a. The estimated annular volume of grout has been injected;
- b. The exhausted grout at each vent is not less than 85 percent of the density of freshly injected grout;
- c. The exhausted grout at each vent is not less than 85 percent of the original viscosity of the freshly injected grout; and
- d. When recommended by the grout installer

712-3.2 FIELD QUALITY CONTROL. For each delivery truck batch, the Contractor shall take samples and perform the following tests:

- a. Density per ASTM C 138
- b. Viscosity per ASTM C 939
- c. Minimum penetration resistance in 24-hours when tested in accordance with ASTM C 403
- d. Minimum compressive strength in 28-days when tested in accordance with ASTM C 495

An independent testing laboratory retained by the Contractor shall prepare, store, cure and test each sample. Contractor shall submit lab test results.

712-3.3 FINAL ACCEPTANCE. Final approval of the annular space grout work will be based on the results of the lab test results, final inspection of the liner pipe, confirmation that the annular space was filled to the level or volume specified and confirmation that the liner pipe did not leak, float or collapse or was damaged in another way due to the annular grouting work.

METHOD OF MEASUREMENT

712-4.1 Measurement of grout shall be per cubic yard of grout that is installed. Measurement shall be made after the cement grout in the truck has been injected with the foaming agent at the project site. Measurement shall be based on the amount of grout that is injected or pumped into the annular space and other voids. Measurement shall not be based on the neat line of calculated annular space volume.

BASIS OF PAYMENT

712-5.1 Payment for this work includes all labor, materials, tools, equipment, apparatus, and incidentals required to complete the work described in this Section.

Payment will be made under:

Item D-712a Annular Space Grout - Cubic Yard

ITEM D-713 PIPE CLEANING

DESCRIPTION

713-1.1 Contractor shall furnish all labor, materials, and equipment necessary for the proper cleaning of the storm drain pipes for sliplining. Cleaning shall be completed prior to rehabilitation. Storm line cleaning may be performed with high-velocity hydro-cleaning equipment, by manual means or mechanical cleaning equipment.

Pipes on this project contain approximately two inches of debris along the invert of the existing pipe.

CONSTRUCTION REQUIREMENTS

713-2.1 PIPE CLEANING. The pipe segments shall be cleaned prior to rehabilitation. Selection of the equipment used shall be based on the condition of the existing pipe at the time the Work commences. The equipment shall be capable of removing dirt, grease, rocks, sand, pipe coating debris and other materials and obstructions from the line. If cleaning of an entire section cannot be successfully performed from one end to the other to another, the equipment shall be set up on the other end and cleaning again attempted. The cleaning Work shall be performed to a level required to prepare the pipeline for rehabilitation as required in these Specifications.

713-2.2 CLEANING PRECAUTIONS. Pipe cleaning operations, satisfactory precautions shall be taken in the use of cleaning equipment. Care shall be exercised to avoid damage to the pipe structure.

The Contractor shall be responsible and repair, at no cost to the Owner, any damage to the structure of a sound pipe caused by use of the storm drain cleaning equipment.

Cleaning shall be accomplished so that pipe rehabilitation can be properly accomplished, as determined by the Engineer, or the line shall be re-cleaned at no additional cost to the Owner.

713-2.3 MATERIAL REMOVAL. Sludge, dirt, sand, rocks, grease, and other solid or semisolid material resulting from the cleaning operation shall be removed from the section being cleaned. All material greater than 1-inch in diameter shall be removed from the existing host pipe.

713-2.4 MATERIAL DISPOSAL. All solids or semisolids resulting from the cleaning operations shall be removed from the site and disposed of by the Contractor. All materials shall be removed from the Work site at the end of each workday. Under no circumstances will the Contractor be allowed to accumulate debris, etc., on the work site beyond a single workday.

713-2.5 WATER FOR STORM DRAIN CLEANING. Water for storm drain cleaning is the responsibility of the Contractor to obtain.

713-2.6 FINAL ACCEPTANCE. Final acceptance of the line cleaning shall be made upon the successful completion of the pigging work as required in these Contract Documents. If pigging work shows the cleaning to be unsatisfactory to perform rehabilitation, the Contractor shall be required to reclean and re-inspect the storm drain line by pigging until the cleaning is shown to be satisfactory, at no additional cost.

METHOD OF MEASUREMENT

713-3.1 No measurement will be made for pipe cleaning.

BASIS OF PAYMENT

713-4.1 No additional payment will be made for pipe cleaning. This work is considered incidental to the Work completed in other sections.

ITEM D-751 VAULTS

DESCRIPTION

751-1.1 This item shall consist of construction of the vault, according to these Specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the Plans or required by the Engineer.

MATERIALS

751-2.1 MORTAR. Mortar shall consist of one part by volume portland cement and two parts sand. The portland cement shall conform to the requirements of AASHTO M 85, Type I. The sand shall conform to the requirements of AASHTO M 45.

751-2.2 CONCRETE. Plain and reinforced concrete used in structures, connections of pipes with structures, and the support of structures or frames shall conform to the requirements of Section P-610.

Concrete composition for the Vault shall conform to the composition requirements specified in Section P-610 with additional water proofing admixture applied per manufacturer's recommendations and in accordance with Section P-610.

751-2.3 FRAMES, COVERS, AND HATCHES. The frames, covers and hatches shall be the models specified in the Plans or approved equal and shall be watertight.

All castings or structural steel units shall conform to the dimensions shown on the Plans and shall be designed to support the loadings, aircraft gear configuration and/or direct loading, specified.

Each frame and cover or grate unit shall be provided with fastening members to prevent it from being dislodged by traffic but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of AASHTO M 111.

751-2.4 STEPS. The steps or ladder bars shall be gray or malleable cast iron, injection-molded polypropylene, or galvanized steel. The steps shall be the size, length, and shape shown on the Plans and those steps that are not galvanized shall be given a coat of bituminous paint, when directed.

751-2.5 JOINT SEALANT. Waterproof membrane joint sealant shall be MiraDRI 860/861 Self Adhering Waterproof Membrane or approved equal.

CONSTRUCTION METHODS

751-3.1 UNCLASSIFIED EXCAVATION.

- a. **Limits of Excavation.** The Contractor shall excavate to the lines and grades or elevations, shown on the Plans, or as staked by the Engineer. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the Plans, shall be considered as approximately only; and the Engineer may direct, in writing, changes in dimensions or elevations of footings necessary for a satisfactory foundation.
- b. **Excavation.** Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the Engineer. All seams or

crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. Where concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed, and excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

- c. **Shoring.** The Contractor shall do all bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for the structure.
- d. **Shoring Removal.** All bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall not damage or disturb finished masonry. The cost of removal shall be included in the unit price bid for the structure.
- e. **Engineer's Approval.** After excavation is completed for each structure, the Contractor shall notify the Engineer. No concrete or reinforcing steel shall be placed after the Engineer has approved the depth of the excavation and the character of the foundation material.

751-3.3 CONCRETE STRUCTURES. Concrete structures shall be built on prepared foundations. The contractor shall confirm the dimensions and shape prior to removing the existing structure. The construction shall conform to the requirements specified in Item P-610. Reinforcement is required and shall be depicted on shop drawings prepared by the contractor. Shop drawings shall be approved by the Engineer before the concrete is placed.

All invert channels shall be constructed and shaped accurately so as to be smooth, uniform, and cause minimum resistance to flowing water. The interior bottom shall be sloped to the outlet.

751-3.4 INLET AND OUTLET PIPES. Inlet and outlet pipes shall extend through the walls as shown in the Plans.

751-3.7 PLACEMENT AND TREATMENT OF CASTINGS, FRAMES, AND FITTINGS. All castings, frames, and fittings shall be placed in the positions indicated on the Plans or as directed by the Engineer, and shall be set true to line and elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

When frames or fittings are placed on previously constructed masonry, the bearing surface of the masonry shall be brought true to line and grade and shall present an even bearing surface in order so the entire face or back of the unit will come in contact with the masonry. The unit shall be set in mortar beds and anchored to the masonry as indicated on the Plans or as directed by the Engineer. All units shall set firm and secure.

After the frames or fittings have been set in final position the concrete or mortar shall be allowed to harden for 7 days, before the grates or covers are placed and fastened down.

751-3.8 INSTALLATION OF STEPS. The steps shall be installed as indicated on the Plans or as directed by the Engineer. When the steps are to be set in concrete, they shall be placed and secured in position before the concrete is placed. When the steps are installed in brick masonry, they shall be placed as the masonry is being built. The steps shall not be disturbed or used until the concrete or mortar has hardened for at least 7 days. After 7 days, the steps shall be cleaned and painted, unless they have been galvanized.

When steps are required with precast concrete pipe structures, they shall be cast into the sides of the sections at the time the sections are manufactured or set in place after the structure is erected by drilling holes in the concrete and cementing the steps in place.

When steps are required with corrugated metal structures, they shall be welded into aligned position at a vertical spacing of 12 inches.

Instead of steps, prefabricated ladders may be installed. For of brick or concrete structures, the ladder shall be held in place by grouting the supports in drilled holes. For metal structures, the ladder shall be secured by welding the top support to the structure and grouting the bottom support into drilled holes in the foundation or as directed by the Engineer.

751-3.9 BACKFILLING. After a structure has been completed, the area around it shall be backfilled with approved material, in horizontal layers not to exceed 8 inches in loose depth, and compacted to the density required in Item P-152 or P-154 as applicable. Each layer shall be deposited evenly around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the Plans or as directed by the Engineer.

Backfilling shall not be placed against any structure until approved by the Engineer. For concrete structures, approval shall not be given until the concrete has been in place 7 days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill placing methods.

METHOD OF MEASUREMENT

751-4.1 Concrete Vault for Valve Assembly shall be measured as a Lump Sum pay unit, complete, including all concrete work, forms, rebar, sub grade preparation, bedding, frame and cover, hatch, penetration assemblies, joint waterproofing, temperature and precipitation control, finishing and other miscellaneous appurtenant items all in accordance with the Contract Documents.

BASIS OF PAYMENT

751-5.1 The accepted vault will be paid for at the contract lump sum price complete and in place.

All excavation and backfill required to complete the items of this section shall not be included in this pay item, but shall be measured for payment under excavation, embankment and subbase pay items.

Payment will be made under:

Item D-751a Concrete Vault for Valve Assembly – Lump Sum

MATERIAL REQUIREMENTS

AASHTO M 36	Zinc Coated (Galvanized) Corrugated Iron or Steel Culverts and Underdrains
AASHTO M 45	Aggregate for Masonry Mortar
AASHTO M 85	Portland Cement
AASHTO M 103	Steel Castings, Carbon, for General Application
AASHTO M 111	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A47	Malleable Iron Castings
ASTM A48	Gray Iron Castings

ASTM A283	Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes, and Bars
ASTM A536	Ductile Iron Castings
ASTM A897	Austempered Ductile Iron Castings
ASTM C32	Sewer and Manhole Brick
ASTM C478	Precast Reinforced Concrete Manhole Sections
ASTM C1433	Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers

ITEM F-162 CHAIN-LINK FENCE

162-1.1 DESCRIPTION This item shall consist of furnishing and erecting a chain-link fence, removing and disposing existing fence and installing temporary security fence and barricades according to these specifications and the details shown on the Plans.

162-1.2 GENERAL The airport perimeter shall be secure at all times. Temporary fencing shall be used to secure the area when existing fence must be removed. Temporary fence shall be installed prior to the removal of existing fencing. New fence shall be installed prior to removal of temporary fence.

All spacing requirements specified herein or in the Plans shall include distances along the existing fence, E.G. should the nearest pull post on the existing fence be 200 feet from the limit of the new fence, that distance shall be included in the maximum spacing requirement for pull posts such that a pull post must be installed 50 feet along the new fence.

The existing fence shall be surveyed by the contractor prior to removal. The new fence shall be installed in the same location.

162-2 MATERIALS

162-2.1 FABRIC. Chain-link fabric shall meet AASHTO M 181, 9-gage thickness, Type I (zinc-coated steel), Class D coating, and 2-inch mesh.

162-2.2 BARBED WIRE. Barbed wire shall meet AASHTO M 280, Design Number 12-4-5-14R, Standard Grade, Coating Type Z, and Coating Class 3.

162-2.3 POSTS, RAILS AND BRACES. Line posts, rails, and braces shall be galvanized steel pipe, or equivalent galvanized roll-formed sections, and meet AASHTO M 181, Type I, Grade 1 or Grade 2.

The dimensions of the posts, rails, and braces shall be as shown on the Plans.

162-2.4 WIRE TIES AND TENSION WIRES. Wire ties for use in conjunction with a given type of fabric shall be of the same material and coating weight identified with the fabric type. Tension wire shall meet AASHTO M 181, Type I, Class 3 coating.

162-2.5 MISCELLANEOUS FITTINGS AND HARDWARE. Miscellaneous steel fittings and hardware shall meet AASHTO M 181, Type I, Grade 1 Barbed wire support arms shall withstand a load of 250 pounds applied vertically to the outermost end of the arm.

162-2.6 CONCRETE. Concrete shall meet the requirements of P-610.

162-2.7 MARKING. Each roll of fabric shall carry a tag showing the kind of base metal, kind of coating, the gage of the wire, the length of fencing in the roll, and the name of the manufacturer. Posts, wire, and other fittings shall be identified as to manufacturer, kind of base metal, and kind of coating.

162-2.8 TEMPORARY FENCING. Temporary fencing with lights shall be provided by the Owner at a facility on Airport Grounds. The Contractor shall retrieve, transport to the site and install the temporary fencing with lights at the locations shown in the plans. Temporary Fencing shall be maintained in working order such that the airport perimeter is secure at all times.

162-2.9 Temporary Barricades. Temporary barricades shall be provided by the contractor to be in accordance with OSHA construction safety standards, 29 CFR 1926.

163-3 CONSTRUCTION METHODS

162-3.1 GENERAL. The fence shall be constructed according to the details on the Plans and as specified herein using new materials. The Contractor shall be responsible for establishing the fence alignment as

shown on the Plans. After the fence line has been staked and prior to fence installation, the Contractor shall review the alignment with the Engineer and make required adjustments to avoid conflicts.

The Contractor shall arrange the work so that temporary fencing will be installed prior to removal of existing fencing. The perimeter security fence shall be secure at all times.

The Contractor shall arrange the work so that construction of the new fence will be installed prior to removal of temporary fencing. The perimeter security fence shall be secure at all times.

162-3.2 CLEARING FENCE LINE. All trees, brush, stumps, logs, and other debris which would interfere with the proper construction of the fence in the required location shall be removed a minimum width of 10 feet on each side of the fence centerline before starting fencing operations.

162-3.3 INSTALLING POSTS. All end posts, corner posts and pull posts shall be set in concrete at the required dimensions and depths and at the spacing shown on the Plans. Line posts may be either set in concrete as shown on the Plans or driven a minimum of 5 feet embedment. Pull posts shall have a maximum spacing of 250 feet.

Posts shall be spaced as shown on the Plans but in no case shall spacing be more than 10 feet. The post holes shall be in proper alignment so that there is a minimum of 3 inches of concrete on all sides of the posts. The concrete shall be thoroughly compacted around the posts by tamping or vibrating and shall have a smooth finish slightly higher than the ground and sloped to drain away from the posts. All posts shall be set plumb and to the required grade and alignment. No materials shall be installed on the posts, nor shall the posts be disturbed in any manner within 7 days after the individual post footing is completed.

Should rock be encountered at a depth less than the planned embedment depth, a hole 2 inches larger than the greatest dimension of the posts shall be drilled to a depth of 12 inches. After the posts are set, the remainder of the drilled hole shall be filled with grout, composed of one part Portland cement and two parts mortar sand. Any remaining space above the rock shall be filled with concrete in the manner described above.

In lieu of drilling, the rock may be excavated to the required embedment depth.

162-3.4 INSTALLING TOP RAILS. The top rail shall be continuous and shall pass through the post tops. The coupling used to join the top rail lengths shall allow for expansion.

162-3.5 INSTALLING BRACES. Horizontal brace rails, with diagonal truss rods and turnbuckles, shall be installed at all terminal posts.

162-3.6 INSTALLING FABRIC. The wire fabric shall be firmly attached to the posts and braced in the manner shown on the Plans. All wire shall be stretched taut and shall be installed to the required elevations. The fence shall generally follow the contour of the ground, with the bottom of the fence fabric no less than 1 inch or more than 4 inches from the ground surface. Grading shall be performed where necessary to provide a neat appearance.

At locations of small natural swales or drainage ditches and where it is not practical to have the fence conform to the general contour of the ground surface, longer posts may be used and multiple strands of barbed wire stretched thereon to span the opening below the fence. The vertical clearance between strands of barbed wire shall be 6 inches or less.

162-3.7 ELECTRICAL GROUNDS. Electrical grounds shall be installed along the fence between gate openings and at intervals not exceeding 500 feet. Electrical grounds shall also be installed where a power line passes over the fence. The ground shall be accomplished with a copper clad rod 8 feet long and a minimum of 5/8 inch diameter driven vertically until the top is 6 inches below the ground surface. A No. 6 solid copper conductor shall be clamped to the rod and to the fence in such a manner that each element of the fence is grounded. The Contractor shall comply with FAA-STD-019, Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment, Paragraph 4.2.3.8, Lightning Protection for Fences and Gates, when fencing is adjacent to FAA facilities.

162-4 METHOD OF MEASUREMENT

162-4.1. Chain-Link Fence and Remove Chain Link Fence will be measured per linear foot along the top of the fence from center to center of end posts, including posts, bases, fabric, ground wire, barbed wire, excavation and backfill to remove bases and fill voids, disposal of all fence materials at a Contractor provided disposal site and other work as shown in the Plans or Directed by the Engineer.

162-4.2. Temporary Fencing and Barricades will be measured as a Lump Sum Pay Unit, complete, including coordination with the Owner for fence removal and maintenance of fencing in accordance with the Contract Documents.

162-5 BASIS OF PAYMENT

162-5.1 Payment will be made at the contract unit price per linear foot for fence and fence removal.

Payment for Temporary Fencing and Barricades shall be made at the contract lump sum price and shall constitute full payment for all Work described in this section, as shown in the plans and as directed by the Engineer.

Work and materials involved in clearing and disposal of material along the fence line, rock excavation, and ground rod installation are subsidiary.

Payment will be made under:

Item F-162a	Chain-Link Fence - Linear Foot
Item F-162b	Temporary Fencing and Barricades – Lump Sum
Item F-162c	Remove Chain Link Fence – Linear Foot

162-6 MATERIAL REQUIREMENTS

AASHTO M 181	Chain-Link Fence
AASHTO M 280	Metallic-Coated (Carbon) Steel Barbed Wire
ASTM A121	Standard Specification for Metallic-Coated Carbon Steel Barbed Wire
ASTM A123	Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A392	Zinc-Coated Steel Chain-Link Fence Fabric
ASTM A491	Aluminum-Coated Steel Chain-Link Fence Fabric
ASTM A572	High-Strength Low-Alloy Columbium-Vanadium Structural Steel
ASTM A653	Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A824	Metallic-Coated Steel Marcellled Tension Wire for Use With Chain Link Fence
ASTM A1011	Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High Strength Low Alloy with Improved Formability, and Ultra High Strength
ASTM B117	Operating Salt Spray (Fog) Apparatus
ASTM B221	Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles and Tubes
ASTM B429	Aluminum-Alloy Extruded Structural Pipe and Tube
ASTM F668	Polyvinyl Chloride(PVC), Polyolefin and other Organic Polymer Coated Steel Chain-Link Fence Fabric
ASTM F1043	Strength and Protective Coatings on Steel Industrial Fence Framework
ASTM F1083	Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
ASTM F1183	Aluminum Alloy Chain Link Fence Fabric
ASTM F1345	Zinc 5% Aluminum-Mischmetal Alloy Coated Steel Chain-Link Fence Fabric
ASTM G152	Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G153	Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G154	Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
ASTM G155	Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials
FAA-STD-019	Lighting and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment

ITEM G-105 MOBILIZATION AND DEMOBILIZATION

DESCRIPTION

105-1.1 This item consists of preparatory work and operations, including but not limited to operations necessary to move personnel, equipment, supplies and incidentals to the project site; to establish offices, buildings and other facilities, to perform all other work and operations, including costs incurred, before beginning work on the project; and to complete similar demobilization activities, including submittals such as as-builts, certificates, payrolls, civil rights reports, equipment warranties, etc.

METHOD OF MEASUREMENT

105-4.1 Payment for mobilization and demobilization will be made in partial payments as follows:

- a. With the first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials, the final 10%.

The Owner reserves the right to require submittal of invoices, receipted bills, payrolls, and other appropriate documents to justify any or all payments under this item.

BASIS OF PAYMENT

105-5.1 Payment will be made at the contract lump sum price for Mobilization and Demobilization. This price and payment shall be full compensation for all costs associated with this item.

Payment will be made under:

Item G-105a Mobilization and Demobilization – Lump Sum

ITEM G-135 CONSTRUCTION SURVEYING AND MONUMENTS

DESCRIPTION

135-1.1 GENERAL. Perform surveying and staking essential for the completion of the project and perform the necessary calculations required to accomplish the work in conformance with the Plans and Specifications and standard survey and engineering practices.

Furnish and install survey monuments and monument cases in conformance with the Plans or as directed.

135-1.2 DEFINITIONS.

- a. **Monument:** A fixed physical object marking a point on the surface of the earth; used to commence or control a survey; mark the boundaries of a parcel of land; or the centerline of a right-of-way corridor. Monuments will be Primary or Secondary, as shown on the Plans.
- b. **Point:** An identified spot located on the surface of the earth. For purposes of this definition, a point can be a PK nail, wooden hub, rebar, large nail or other structure capable of being utilized as a marker.
- c. **Witness Corner:** A material mark or point usually placed on a property or survey line, at a known distance from a property corner or other survey point. A witness corner is employed to witness the location of a corner/point that cannot be monumented at its true location.
- d. **Reference Monument:** A material mark or point placed at a known distance and direction from a property corner or other survey point, usually not on a property or survey line. A reference monument is employed to perpetuate a corner/point that cannot be monumented at its true location or where the corner monument is subject to destruction.
- e. **Surveyor:** The Contractor's Professional Land Surveyor, currently registered in the State of Alaska.

MATERIALS

135-2.1 MONUMENT CASES. Castings shall conform to AASHTO M 105, Class 30A. Castings shall be coated with a bituminous damp-proof coating. Bolting tops shall be used.

135-2.2 PRIMARY MONUMENT. A minimum 2-inch diameter nonferrous pipe at least 30 inches long, with a minimum 4-inch flange at the bottom and having magnets attached at the top and bottom. A minimum 2-1/4-inch diameter nonferrous metal cap must be permanently attached to the top. Mark the cap around the outside edge with the words "CITY AND BOROUGH OF JUNEAU". Permanently stamp every monument with the Surveyor's registration number, the year set, and the point/corner identification. Orient cap so that the data may be read facing up-station.

135-2.3 SECONDARY MONUMENT. A minimum 5/8-inch x 30-inch rebar with a 2-inch aluminum cap attached to the top. Permanently stamp every secondary monument with the Surveyor's registration number and the year set.

CONSTRUCTION REQUIREMENTS

135-3.1 GENERAL. Use competent, qualified personnel and suitable equipment for the layout work required and furnish traffic control, stakes, templates, straight-edges and other devices necessary for establishing, checking and maintaining the required points, lines and grades.

Furnish computer services to accomplish the work. Check data received from the computer for completeness and accuracy. As soon as practical after completion of the work, and in no case later than acceptance of the project, deliver field books, computer forms and computer output data to the Engineer. This data becomes the property of the Owner.

Supervise construction surveying personnel. Correct errors resulting from the operations of said personnel at Contractor expense. The Contractor is responsible for the accuracy of the work.

Work classified as Land Surveying under AS 08.48, and work involving the location, control, and monumentation of construction centerline and right-of-way, shall be performed by or under the responsible charge of a Professional Land Surveyor.

Follow the Owner's Construction Surveying Requirements.

Ensure that the contract surveyor contacts the Owner's survey manager prior to performing survey work under this item.

Keep field notes in standard hardbound notebooks in a clear, orderly, and neat manner consistent with the Owner's procedures, including titles, numbering, and indexing. Make field books available for inspection by the Engineer's project personnel at any time. Legible copies of the reduced field notes shall be made daily. Store the field books in the Engineer's Project Office during periods of non-use. Copies of the field books shall be kept in a separate secure location.

Perform the following:

- a. Staking necessary to delineate clearing and/or grubbing limits.
- b. Cross sections necessary for determination of excavation and embankment quantities, including intermediate and/or re-measure cross sections as needed. Take cross sections after clearing and grubbing has been completed.
- c. Slope staking.
- d. Staking of signs, culverts, minor drainage structures and other appurtenances, including the necessary checking to establish the proper location and grade to best fit the conditions on site.
- e. Bridge staking.
- f. Setting finishing stakes.
- g. Measurement of pay quantities that require measurement.
- h. Staking of right-of-way and material source limits.
- i. Staking, referencing and other actions required to preserve or restore land monuments and property corners.
- j. As-built surveying as required under SECTION 01 7839 PROJECT RECORD DOCUMENTS. Tie as-built measurements and locations to project horizontal and vertical survey control.
- k. Asphalt pavement surveying necessary to comply with subsection P-401-5.2 acceptance criteria for smoothness and grade of finished asphalt pavement surfaces.
- l. Staking and hubbing of bottom of excavation and the top of each layer in the pavement structure.

- m. Provide interim calculations for measured items to the Engineer prior to progress payments for each specific item. Ensure that the calculations are completed, checked, and signed by the person in responsible charge of the work.
- n. Other surveying and staking necessary to complete the project.

Notify the Engineer immediately if a CBJ-established reference point is discovered to be in error or a reset point is not in relationship to the adjacent centerline points.

Furnish a notekeeper to record field survey notes, including documentation for quantity computations for payment. Ensure that the notekeeper is thoroughly familiar with generally accepted standards of good survey notekeeping practice and the Owner's Construction Surveying Requirements.

The Engineer may randomly spot check the Contractor's surveys, staking, and computations. After the survey or staking has been completed, provide the Engineer with a minimum of 72 hours' notice before performing work, and furnish the appropriate data, to allow for random spot checking. The Owner assumes no responsibility for the accuracy of the work.

Perform an existing conditions survey of the entire project area to a minimum of 15 feet beyond project limits as shown on the plans. Include topographic features and existing fenceline. Submit existing conditions survey data to the Engineer prior to beginning earthwork activities. Submittal shall include CAD line work of features in DWG format, point files, and existing surface data in XML format.

Measure, compute, and plot all field-measured pay item quantities, including but not limited to excavation and disposal of asphalt cement concrete (AC), subbase, and classified/unclassified excavation volumes. Stake for measurement and calculation of excavation quantities after AC pavement removal. Submit a proposed method of measuring and computing volumes to the Engineer in writing for approval before performing any field work under this item.

Provide item quantities, including computations and plots to the Engineer prior to payment for each specific item. The Owner will review and accept or modify the quantities provided.

Digital terrain modeling (DTM) may be used in determining earthwork quantities as an alternative to before and after cross sections by average end area if the Engineer has agreed in writing to the DTM method prior to commencement of any field work. If DTM is approved and used, provide plotted cross-sections on 10-foot stations with elevations, offsets and computed end areas in square feet for each section prior to earthwork payments for each item. Provide these cross-sections and associated data for the entire area of earthwork computations along with the terrain model.

Accomplish staking in accordance with the following:

- a. Perform the topographic survey by grid or cross section method of surveying 15 feet beyond the project match lines. Take elevation shots at 10-foot intervals, at all terrain breaks, and at topographic features.
- b. Record and locate all project control and baselines and connect them to all surveyed data, both horizontally and vertically.
- c. Upon completion of the before and after survey, provide the Engineer a grid layout sheet showing the baseline, stations and all spot elevations.
- d. Provide the Engineer a contour map of the original ground and an identical size map showing the final elevations with 0.5 foot contour intervals. Provide the Engineer with plotted cross-sections for each station grid with elevations and offsets shown.

- e. At the end of each day's work which requires survey, the surveyor shall email a copy of the downloaded raw data from the data collector, in its original format, to the Engineer. If editing is deemed necessary, send a separate email with the amended electronic data and a change log annotating the changes.

Provide in above products to the Engineer before payment will be made for that work. Provide as-builts and electronic data to the Engineer prior to final inspection.

135-3.2 CROSS-SECTION SURVEYS. When required, obtain right-angle cross sections to the construction centerline at the interval detailed in the Owner's Construction Surveying Requirements.

The following will be supplied by the Owner:

- a. Construction Plans and Specifications.
- b. Design Cross Sections, if any.
- c. State of Alaska Land Survey Monument Record forms.
- d. Owner's Construction Surveying Requirements. One copy.
- e. Design centerline grades.

The following shall be required of the Contractor:

- a. Field Books (Level, Cross-Section, Slope Stake, etc.). Use "Rite-in-the-Rain" or similar weather resistant hardbound field books. Field books become the property of the Owner upon completion of the work.
- b. Label the books and number the pages. Make a heading in the appropriate book (date, weather, names and duties of crew members) at the beginning of each day's work.
- c. Update the index of the appropriate book at the end of each day's work.
- d. Reduce, check, and adjust level notes.
- e. The notekeeper shall compute the cross-section level notes and slope stake catches and a different crew member shall check the computation on a continual basis in the field.
- f. Enter the grade data, shoulder width and/or ditch distance, stationing, slope, etc., in the slope stake books.
- g. Maintain the position and identifying marks of slope stakes and reference points until used for their intended purpose.
- h. Correct errors by drawing a line through them and writing the correct entry directly above. Erasures will not be allowed.
- i. Return field books and copies of the field books to the Project office at the end of each work day or as directed.
- j. Provide copies of grade sheets and temporary bench mark elevations to the Engineer 48 hours before beginning work on unclassified excavation or embankment.
- k. The Contractor's survey crews shall comply with approved traffic control plans. Coordinate crew activities with the Worksite Traffic Supervisor.
- l. Keep a survey Party Chief diary and give a copy of the diary to the Engineer each day. The diary shall contain the following information:

- (1) Date.
 - (2) Weather.
 - (3) Crew members' names and duties.
 - (4) Type and location of work performed.
 - (5) Hours worked.
 - (6) Type of equipment used (brand) and date equipment was double centered or "peg" test was performed.
 - (7) Signature of person in responsible charge.
- m. Submit the survey field notes, for the specific area, relating to monument referencing, before beginning clearing, grubbing or excavation.
- n. Draw cross-sections and complete quantity calculations for all earthwork quantities.

135-3.3 MONUMENTS. Install primary and secondary monuments, as called for in the Plans, at the positions established by the Owner. Prior to the start of construction, reference monuments, to include property markers/corners and accessories, that may be disturbed or buried during construction. In addition, reference monuments designated for referencing on the Plans. Prepare and record Monument Record Forms in the appropriate Recorder's Office before disturbing monuments. Monument Record Forms may be obtained from the Engineer. Re-establish monuments in their original position before completion of the project. Prepare and file a Monument Record Form for each reestablished monument.

Keep records and report to the Engineer evidence that a monument has been disturbed and is no longer reliable or cannot be located and is presumed to be missing. Establish a minimum of two in-line reference points, or three swing-tie reference points in situations where in-line referencing is not desirable. Set reference points outside of the construction limits. Measure distances from the monument to the nearest 0.01 foot. Record referencing of monuments in a separate field book stamped by the Surveyor.

Replace existing monuments disturbed by construction with Primary or Secondary Monuments meeting the requirements of Subsections 135-2.1 through 3. When it is impractical to establish a monument in its original position, install a witness corner (WC). Place the WC to a property corner on the property line when the other property corner that defines said line is existing or there has been sufficient retracement to define said line. In other cases, place a reference monument (RM) perpendicular to the centerline at the station of the original position and at a distance from the original position measured in whole feet.

Those monuments found that are not shown on the Plans will be recognized by the Engineer when the following is provided by the Surveyor: Field notes identifying type and location of the monument, and a description of the point the monument marks, with the reason to preserve its location. Monuments not shown on the Plans will be preserved and shall be considered incidental work.

The Surveyor shall complete a State of Alaska Land Survey Monument Record form for each primary and secondary monument referenced, removed, installed, relocated or replaced. Provide the required survey information on the form according to statutory requirements, including section, township and range. Meet requirements for recording at the District Recorder's Office in which the project is located for each monument record. Deliver conforming copies of the recorded forms to the Engineer before monument removal or disturbance, and after setting any final monuments requiring monument records.

Set each monument and monument case accurately to lines established at the required location and in a manner as to ensure being held firmly in place. Set existing monuments and monument cases to be adjusted to new elevations in the manner and at the elevations directed.

Primary Airport Control (PAC) and Secondary Airport Control (SAC) monuments are present in the project area as shown on the Plans. This control is important and if disturbed, must be reestablished by the Contracting Agency. For this reason, the Contractor is required to employ all reasonable measures to preserve the existing control monuments in an undisturbed condition. If a PAC or SAC is disturbed by the Contractor's actions, the Contractor shall reimburse the State of Alaska for the cost of replacing

monuments, performing geodetic surveys and related data processing, and filing the completed survey with the National Geodetic Surveys office. The estimated cost for reestablishing a disturbed monument is approximately \$50,000, but costs will vary depending on location, season, availability of staff, and other factors.

135-3.4 OFFICE ENGINEERING. Calculate finish grades for the embankments as specified according to Plans and/or Specifications. Use information available in the field, on as-builts, or as provided by the Engineer. This work shall be performed by or under the responsible charge of a Professional Land Surveyor or a Professional Engineer currently registered in the State of Alaska.

135-3.5 FINAL TRAVERSE. Within 30 days after the Engineer receives a letter stating that construction activities that may disturb the monuments have ceased, the Surveyor shall run a final closed traverse to verify the positional accuracy of installed survey monuments. Tie into the traverse the primary and secondary monuments placed or replaced and undisturbed Owner-provided control points. Meet the requirements of a secondary monument for traverse points established during this work. The Surveyor shall sign and stamp a letter that lists each monument and its coordinates. The letter shall certify that the monuments are each located within 0.1 foot of their proposed position based on the project survey control points provided by the Owner. Deliver the certification letter and field notes for this work to the Engineer. This section shall not apply if no monuments are disturbed.

135-3.6 FINISH GRADE CHECKING. Perform all survey work required to verify that the finished surface of all asphalt concrete pavement meets the requirements for grade as specified in subsection P-401-5.2, f(4), Grade Acceptance Criteria. Multiple surveys may be necessary in areas that require reworking.

METHOD OF MEASUREMENT

135-4.1 The work will be measured according to SECTION 00 7000 GENERAL CONDITIONS OF THE CONTRACT, Article 9 PAYMENTS AND COMPLETION, as directed by the Engineer, and as follows:

- a. Lump Sum. No measurement of quantities will be made.

BASIS OF PAYMENT

135-5.1 Pay Items include all necessary personnel, equipment, transportation, and supplies to accomplish the work described in the Contract, or as directed by the Engineer.

Pay Item G-135a Construction Surveying by the Contractor, includes all Contractor surveying work described in the Contract.

Payment will be made under:

Item G-135a Construction Surveying by the Contractor – Lump Sum

ITEM G-300 CRITICAL PATH METHOD SCHEDULING

DESCRIPTION

300-1.1 Provide and maintain a Critical Path Method (CPM) progress schedule for the project. Use the schedule in coordinating and monitoring of all work under the Contract including activity of subcontractors, manufacturers, suppliers, and utility companies, and reviews by the Owner. Update the CPM schedule, as required.

Provide work plans.

SUBMITTAL OF SCHEDULE

300-2.1 Submit a detailed initial CPM Schedule at the pre-construction conference for the Engineer's acceptance as set forth below.

The construction schedule, for the entire project, may not exceed the specified contract time.

Allow the Engineer 14 days to review the initial CPM Schedule. If revisions are required, make them promptly. The finalized CPM Schedule must be completed and accepted prior to commencement of any work on the project.

REQUIREMENTS AND USE OF SCHEDULE

300-3.1

a. Schedule Requirements. Prepare the CPM schedule as a Precedence Diagram Network developed in the activity-on-node format which includes:

- (1) Activity description
- (2) Activity duration
- (3) Resources required for each of the project activities, including:
 - (a) Labor (showing work days per week, holidays, shifts per day, and hours per shift)
 - (b) Equipment (including the number of units of each type of equipment)
 - (c) Materials.

Show on the activity-on-node diagram the sequence and interdependence of all activities required for complete performance of all items of work under this Contract, including shop drawing submittals and reviews and fabrication and delivery activities.

No activity duration may be longer than 15 work days without the Engineer's approval.

The Engineer reserves the right to limit the number of activities on the schedule.

Consider that schedule float time is shared equally with the Owner.

The contract completion time will be adjusted only for causes specified in this Contract.

As determined by CPM analysis, only delays in activities which affect milestone dates or contract completion dates will be considered for a time extension.

b. Schedule Updates. Hold job site progress meetings with the Engineer for the purpose of updating the CPM Schedule. Meet with the Engineer monthly, or as deemed necessary by the

Engineer. Review progress and verify finish dates of completed activities, remaining duration of uncompleted activities, and any proposed logic and/or time estimate revisions. Submit a revised CPM schedule within 5 working days after this meeting showing the finish dates of completed activities and updated times for the remaining work, including any addition, deletion, or revision of activities required by Contract modification.

c. Work Plans. In addition to the CPM schedule, submit a work plan every 2 weeks during construction, detailing your proposed operations for the forthcoming two weeks. Include:

- (1) Work activities
- (2) Manpower involved by trade
- (3) Work hours
- (4) Equipment involved
- (5) Location of the work to be performed

METHOD OF MEASUREMENT

300-4.1 This item will be measured as a Lump Sum Pay Unit, complete and in accordance with the Contract Documents.

BASIS OF PAYMENT

300-5.1 At the lump sum price for CPM Scheduling.

Payment will be made under:

Item G-300a CPM Scheduling – Lump Sum

ITEM G-700 TRAFFIC CONTROL FOR AIRPORTS

DESCRIPTION

700-1.1 Provide suitably equipped airport flagger(s) with no other assigned duties to monitor and control the Contractor's personnel and equipment crossing or occupying any portion of the Air Operations Area of the airport, as required under Section 01 5200 Security and Safety. The airport flagger shall have no other assigned duties.

REQUIREMENTS

700-2.1 Furnish airport flaggers and all necessary equipment. Equip each airport flagger assigned to an aircraft operations area with a two-way radio that broadcasts and receives on the designated Common Traffic Advisory Frequency (CTAF) for the project airport as found in the Alaska Supplement of the United States Government Flight Information Publication and as listed below:

1. Common Traffic Advisory Frequency (CTAF) – 118.7 MHz
2. Tower – 278.3, 118.7 MHz. Between May and September, an additional Tower Frequency of 120.7 MHz will be in use. Its use will be announced via the ATIS on 135.3 MHz.
3. Ground Control – 121.9 MHz

Provide each airport flagger with a two-way radio to contact construction equipment and other airport flaggers on the project. Equip each airport flagger for vehicular traffic control with a flagging paddle that conforms to the requirements of the Alaska Traffic Manual.

Locate each airport flagger at a position as shown on the Plans, as described in the Safety Plan, or at an alternate location as directed by the Engineer. Ensure that each airport flagger maintains their assigned post at all times. Airport flagger positions will be adjusted as conditions warrant.

METHOD OF MEASUREMENT

700-3.1 Airport flagger will be measured by the hour for the actual number of hours that each airport flagger performed as directed by the Engineer.

BASIS OF PAYMENT

700-4.1 Payment will be made at the contract unit price for each Airport Flagger per hour. The hourly rate for Airport Flagger is set at \$57.00 per hour for this contract. The Engineer does not require a change order/directive for this pay item.

Payment will be made under:

Item G-700a Airport Flagger – Contingent Sum

Item L-100 General Electrical Installation and Equipment

DESCRIPTION

100-1.1 The Work under this Section consists of providing tools, materials, labor and equipment to perform operations pertaining to the installation of electrical systems above grade, below grade, and located within hazardous locations in accordance with the National Fire Protection Association (NFPA) 70, National Electrical Code (NEC). The contractor shall conduct work in accordance with the NEC.

GENERAL

100-2.1 Definitions.

- CRI: Color rendering index
- GFCI: Ground-fault circuit interrupter
- LFMC: Liquidtight flexible metal conduit
- PVC: Polyvinyl chloride
- RSC: Rigid steel conduit

100-2.2 Submittals.

- a. Product Data.
 - Ground rods.
 - Conductors and cables.
 - Conduits, raceways, and boxes.
 - Wiring devices.
 - Panelboards.
 - Diesel engine generator.

Documentation certifying compliance with the BUY AMERICAN preference rules for Airport Improvement Program (AIP) cited in 49 USC §50101) shall be included with each equipment and material submittal.

- b. Shop Drawings.
 - Panelboards and overcurrent protective devices.
 - Diesel engine generator.
- c. Field Test Reports – reports shall include the following items.
 - Test procedures used.
 - Test results that comply with the requirements.
 - Results of failed tests and corrective action taken to achieve test results that comply with the requirements.

100-2.3 Quality assurance. Electrical components, devices, and accessories must comply with NFPA 70 and be listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

100-2.4 Coordination.

- a. Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow.
- b. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work.
- c. Where electrical identification devices are applied to field-finished surfaces, coordinate installation of identification devices with completion of finished surface.
- d. Coordinate layout and installation of raceways, boxes, enclosures, cabinets, and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

100-2.5 Field quality control.

- a. Inspect installed components for damage and faulty work, including the following:
 - Supporting devices for electrical components.
 - Electrical identification.
- b. Conductor and cable tests. After installing conductors and cables and before electrical circuitry has been energized, test feeder conductor insulation for compliance with requirements.
- c. Wiring Devices.
 - After installing wiring devices and after electrical circuitry has been energized, test for proper polarity, ground continuity, and compliance with requirements.
 - Test GFCI operation with both local and remote fault simulations according to manufacturer's written instructions.

100-2.6 Refinishing and touchup paint.

- a. On completion of installation, including outlets, fittings, and devices, inspect exposed finish. Remove burrs, dirt, paint spots, and construction debris.
- b. Protect equipment and installations and maintain conditions to ensure that coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

BASIC MATERIALS AND METHODS

100-3.1 Supporting Devices.

- a. Metal Items for Use Outdoors, in Damp Locations, or in corrosive environments: Hot-dip galvanized steel, or stainless steel.
- b. Slotted-Steel Channel Supports: Flange edges turned toward web, and 9/16-inch-diameter slotted holes at a maximum of 2 inches o.c., in webs.
 - Channel Thickness: Selected to suit structural loading.
 - Fittings and Accessories: Products of the same manufacturer as channel supports.
- c. Raceway and Cable Supports. Manufactured clevis hangers, straps, threaded C-clamps with retainers, ceiling trapeze hangers, and wall brackets.
- d. Electrical Equipment Installation.
 - Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide the maximum possible headroom.
 - Materials and Components: Install level, plumb, and parallel and perpendicular to other building systems and components, unless otherwise indicated.
 - Equipment: Install to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.
 - Right of Way: Give to raceways and piping systems installed at a required slope.
- e. Electrical supporting device application.
 - Damp Locations and Outdoors: Hot-dip galvanized materials or stainless steel materials.
 - Selection of Supports: Comply with manufacturer's written instructions.
 - Strength of Supports: Adequate to carry present and future loads, multiplied by a safety factor of at least four; minimum of 200-lb design load.
- f. Support installation.
 - Install support devices to securely and permanently fasten and support electrical components.
 - Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assemblies and for securing hanger rods and conduits.
 - Support individual horizontal raceways separately with malleable-iron pipe hangers or clamps.
 - Install ¼-inch diameter or larger threaded steel hanger rods, unless otherwise indicated.
 - Separately support cast boxes that are threaded to raceways and used for fixture support.
 - Install metal channel racks for mounting cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices, unless components are mounted directly to structural elements of adequate strength.
 - Securely fasten electrical items and their supports to the building structure, unless otherwise indicated. Perform fastening according to the following unless other fastening methods are indicated.
 - i. New Concrete: Concrete inserts with machine screws and bolts.
 - ii. Existing Concrete: Expansion bolts.
 - iii. Steel: Welded threaded studs or spring-tension clamps on steel.

- iv. Field Welding: Comply with AWS D1.1. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or other items.
- v. Light Steel: Sheet-metal screws. Fasteners: Select so the load applied to each fastener does not exceed 25 percent of its proof-test load.

100-3.2 Identification.

- a. Identification Devices: A single type of identification product for each application category. Use colors prescribed by ANSI A13.1, NFPA 70, and these Specifications.
- b. Underground Warning Tape: Permanent, bright-colored, continuous-printed, vinyl tape with the following features:
 - Not less than 6 inches wide by 4 mils thick.
 - Compounded for permanent direct-burial service.
 - Embedded continuous metallic strip or core.
 - Printed legend that indicates type of underground line.
- c. Tape Markers for Wire: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.
- d. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
- e. Engraved-Plastic Labels, Signs, and Instruction Plates: Engraving stock, melamine plastic laminate punched or drilled for mechanical fasteners 1/16-inch minimum thickness for signs up to 20 sq.in. and 1/8-inch minimum thickness for larger sizes. Engraved legend in white letters on black background.
- f. Fasteners for Nameplates and Signs: Self-tapping, stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.
- g. Installation.
 - Install at locations for most convenient viewing without interference with operation and maintenance of equipment.
 - Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated in the Contract Documents or required by codes and standards. Use consistent designations throughout Project.
 - Self-Adhesive Identification Products: Clean surfaces before applying.
 - Install continuous underground plastic markers during trench backfilling.
 - Color-code 208/120-V system secondary service, feeder, and branch-circuit conductors throughout the secondary electrical system as follows:
 - i. Phase A: Black
 - ii. Phase B: Red
 - iii. Phase C: Blue

100-3.3 Touchup paint.

- a. For Equipment: Equipment manufacturer's paint selected to match installed equipment finish.
- b. Galvanized Surfaces: Zinc-rich paint recommended by item manufacturer.

GROUNDING

100-4.1 Grounding Conductors.

- a. Material: Copper, only.
- b. Equipment Grounding Conductors: Insulated with green-colored insulation.
- c. Grounding Electrode Conductors: Stranded cable.

- d. Copper Bonding Conductors: As follows:
- Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG copper conductor, ¼ inch in diameter.
 - Bonding Conductor: No.4 or No.6 AWG, stranded copper conductor.
 - Bonding Jumper: Bare copper tape, braided bare copper conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/6 inch thick.
 - Tinned Bonding Jumper: Tinned-copper tape, braided copper conductors, terminated with copper ferrules; 1-5/8 inch wide and 1/16 inch thick.

100-4.2 Connector products.

- a. Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items.
- b. Bolted Connectors: Bolted-pressure-type connectors, or compression type.
- c. Crimped Connectors: High compression type, in kit form, and selected per manufacturer's written instructions.

100-4.3 Grounding electrodes. Copper clad steel 96 inches in length and 5/8 inches in diameter.

100-4.4 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 Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade unless otherwise indicated.
 - Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
 - For grounding electrode system, install at least three rods spaced at least 10 feet from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor

CONDUCTORS AND CABLES

100-5.1 Conductor and cable material.

- a. Stranded Copper
- b. Insulation Types: Type XHHW-2 complying with UL 44.

100-5.2 Conductor and insulation applications.

- a. Exposed Feeders: XHHW-2, single conductors in raceway.
- b. Exposed Branch Circuits: Type XHHW-2, single conductors in raceway.
- c. Cord Drops and Portable Appliance Connections: Type SO, G, or W, hard service cord.
- d. Class 1 Control Circuits: XHHW-2, single conductors in raceway.
- e. Coordinate conductor insulation temperature rating and ampacity rating with the temperature and ampacity rating of their circuit protection devices.
- f. 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 and UL 486B.

- g.** Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
 - Use oxide inhibitor in each splice and tap conductor
- h.** Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

RACEWAYS

100-6.1 Conduit and tubing.

- a.** Rigid Steel Conduit: ANSI C80.1
- b.** LFMC: Flexible steel conduit with PVC jacket, Federal Specification W-C-566C.
- c.** Fittings: Comply with NEMA FB 1 and UL 514B; compatible with conduit and tubing materials.

100-6.2 Installation.

- a.** Outdoors, Underground, and Inside Vault:
 - Rigid steel
 - Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment):, LFMC
 - Boxes and Enclosures: NEMA 250, 4X, 316 Stainless steel and cast steel.
- b.** Minimum Raceway Size: ½-inch trade size.
- c.** Raceway Fittings: Compatible with raceways and suitable for use and location.
 - Rigid Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
- d.** Install exposed raceways, and raceways within accessible spaces, parallel or at right angles to nearby surfaces or structural members and follow surface contours as much as possible.
 - Run parallel or banked raceways together on common supports.
 - Make parallel bends in parallel or banked runs. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.
- e.** Join raceways with fittings designed and approved for that purpose and make joints tight.
 - Use insulating bushings to protect conductors.
- f.** Tighten set screws of threadless fittings with suitable tools.
- g.** Terminations.
 - Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against box. Use two locknuts, one inside and one outside box.
 - Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into hub so end bears against wire protection shoulder. Where chase nipples are used, align raceways so coupling is square to box; tighten chase nipple so no threads are exposed.
 - Flexible Connections: Use maximum of 36 inches of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for all motors. Install separate ground conductor across flexible connections.

BOXES, ENCLOSURES, AND CABINETS

100-7.1 Cast-metal outlet and device boxes. NEMA FB 1, Type FD, with gasketed cover.

100-7.3 Cast-Metal Pull and Junction Boxes. NEMA FB 1, cast aluminum with gasketed cover.

100-7.4 Hinged-Cover Enclosures. NEMA 250, Type 4, stainless steel, with continuous hinge cover and padlock hasp.

- a. Metal Enclosures: Stainless Steel.

100-7.5 Cabinets. NEMA 250, Type 4, stainless steel box.

WIRING DEVICES

100-8.1 Receptacles.

- a. GFCI Receptacles: Straight blade, feed-through type, Heavy-Duty grade, with integral NEMA WD 6, Configuration 5-20R duplex receptacle; complying with UL 498 and UL 943. Design units for installation in a 2-3/4-inch-deep outlet box without an adapter.
- b. Industrial Heavy-Duty Pin and Sleeve Devices: Comply with IEC 309-1.

100-8.2 Switches.

- a. Single-Pole Switches: Comply with DSCC W-C-896F and UL 20. Heavy-Duty grade, quiet type.

100-8.3 Installation.

- a. Install devices and assemblies level, plumb, and square with building lines.
- b. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical, and with grounding terminal of receptacles on bottom.

LIGHTING

100-9.1 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.

- a. NFPA 70 Compliance: Luminaires shall be listed and labeled for indicated class 1 division 2 by NFPA 70

100-9.2 Nominal operating voltage. 120 V ac.

100-9.3 Installation.

- a. Fixtures. Set level, plumb, and square with ceilings and walls. Install lamps in each fixture.
- b. Mounting: Surface Mounting with LFMC conduit.

PANELBOARDS

100-10.1 Panelboards. Sized and rated in accordance to the panel schedules in the drawings. The bus bars may be copper. Provide with multiple lugs as required. Provide a neutral terminal bar. Provide a ground terminal bar if ground conductors are terminated in the panelboard. Brace for 10,000 symmetrical RMS amperes, unless otherwise noted.

100-10.2 Enclosures. Size the enclosure to allow for adequate wire gutter space. The front shall be a single element with a lockable door. The front shall be removable only with the door open. A typed circuit directory shall be located inside the door. Provide keys. The interior assembly shall be deadfront with the front cover removed.

- a. Rated for environmental conditions at installed location
 - Outdoor Locations. NEMA 250, Type 4X, 316 stainless Steel
- b. Front. Secured to box with concealed trim clamps

100-10.3 Circuit directory. Type the circuit directory with circuit descriptions as they are shown in the drawing panelboard schedules. The directory shall be configured identically with the circuit breaker configuration.

GENERATOR

100-11.1 Acquisition. Generator to be provided by contractor as a piece of equipment required for the operations pertaining to this installation and must meet FAA Buy American requirements or be eligible for a waiver from those requirements.

100-11.2 Warranty. Manufacturer agrees to repair or replace components of packaged engine generators and associated auxiliary components that fail in materials or workmanship within period of two years.

100-11.3 Engine generator assembly.

- a. Factory-assembled and -tested, water-cooled engine, with brushless generator and accessories.
- b. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
- c. Service Load: 10 KW
- d. Power Factor: 0.8, lagging
- e. Frequency: 60 Hz.
- f. Voltage: 208 V ac., three-phase, four wire, wye.
- g. Induction Method: Naturally Aspirated.
- h. Mounting Frame: Structural steel framework to maintain alignment of mounted components without depending on concrete foundation. Provide lifting attachments sized and spaced to prevent deflection of base during lifting and moving.

100-11.4 Diesel engine.

- a. Fuel: ASTM D 975, diesel fuel oil, Grade 2-D S15.
- b. Rated Engine Speed: 1800 rpm.
- c. Lubrication System: Engine or skid-mounted. Filter and Strainer, Thermostatic Control Valve, and Crankcase Drain.
- d. Cooling System: Closed loop, liquid cooled, with radiator factory mounted on engine generator set mounting frame and integral engine-driven coolant pump. Coolant solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer. Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.
- e. Muffler/Silencer: Commercial type, sized as recommended by engine manufacturer and selected with exhaust piping system to not exceed engine manufacturer's engine backpressure requirements.
- f. Air-Intake Filter: standard-duty, engine-mounted air cleaner with replaceable dry-filter element and "blocked filter" indicator.

- g.** Starting System: 12 V electric, with negative ground. Components sized so they are not damaged during a full engine-cranking cycle. Heavy-duty cranking motor that automatically engages and releases from engine flywheel without binding. Lead-acid battery with capacity for three 30 second cranking cycles.

100-11.5 Diesel fuel oil system.

- a.** Comply with NFPA 30.
- b.** Fuel Filtering: Remove water and contaminants larger than 1 micron.
- c.** Subbase-Mounted, Double-Wall, Fuel-Oil Tank: Factory installed and piped. Features include tank level indicator. Capacity of 30 gallons, minimum.

100-11.6 Control and monitoring.

- a.** Manual Starting System Sequence of Operation: Switching on-off switch on the generator control panel to the on position starts engine generator. The off position of same switch initiates engine generator shutdown. When engine generator is running, specified system or equipment failures or derangements automatically shut down engine generator and initiate alarms.
- b.** Configuration: Operating and safety indications, protective devices, basic system controls, and engine gages shall be grouped in a common control and monitoring panel mounted on the engine generator. Mounting method shall isolate the control panel from engine generator vibration. Panel shall be powered from the engine generator battery.
- c.** Include a digital controller with integrated display or equal with the following:
 - Lubricating oil pressure.
 - Coolant temperature.
 - AC volts, amperes, kilowatts, and frequency.
 - Alarms including high engine temperature and low oil pressure.

100-11.7 Generator overcurrent protection.

- a.** Molded-case, thermal-magnetic type; complying with UL 489.
- b.** Match the generator output rating.
- c.** Shunt trip when engine is shut down by protective devices.
- d.** Generator Exciter and Voltage Regulator.
 - Comply with NEMA MG 1.
 - Generator shaft shall be directly connected to engine shaft. Exciter shall be rotated integrally with generator rotor.
 - Electrical Insulation: Class F.
 - Enclosure: Drip-proof.
 - Voltage Regulator: Solid-state type, separate from exciter.

100-11.8 Outdoor engine generator.

- a.** Vandal-resistant, sound-attenuating, weatherproof steel housing; wind resistant up to 100 mph (160 km/h).
- b.** Hinged Doors: With padlocking provisions.

100-11.9 Trailer.

- a.** Mount engine generator to a trailer to be towed with a standard sized pickup truck.
- b.** Trailer frame of steel construction, rated to support the weight of all equipment mounted to it.

- c. Leaf spring suspension.
- d. D-rings mounted to trailer for chain reinforcement while trailer is being transported.
- e. All-season tires with one spare wheel with dedicated mount.
- f. Ball coupler to attach trailer to pickup truck with safety chains included for secondary attachment.
- g. Permanently affixed jack to trailer tongue to allow trailer to be removed from pickup truck and remain on site
- h. DOT approved lights including but not limited to brake lights and turn indicators.
- i. All equipment permanently affixed to trailer surface using stainless steel bolts rated for the forces that will be acting upon them.

100-11.10 Source quality control.

- a. Prototype Testing: Factory test engine generator using same engine model, constructed of identical or equivalent components and equipped with identical or equivalent accessories. Comply with IEEE 115.

METHOD OF MEASUREMENT

100-12.1 Measurement for all electrical systems requiring testing and reporting shall be measured based upon the completion of the entire work as a Lump Sum Pay Unit in accordance with the contract documents.

BASIS OF PAYMENT

100-13.1 Payment for this Work shall be made at the contract lump sum price and shall constitute full payment for all Work described in this section, including maintenance activities.

Payment shall be made under:

Item L-100a Electrical – Lump Sum

Item L-100a.2 Trailer Mounted Generator – Lump Sum

END OF ITEM L-100

ITEM P-101 PAVEMENT REMOVAL

DESCRIPTION

101-1.1 Excavate, haul, and dispose of existing asphalt cement concrete (AC) pavement.

CONSTRUCTION REQUIREMENTS

101-2.1 Perform the work for this item according to the following instructions.

- a. Excavation.** Excavate to the minimum depth necessary for removal of existing pavement where shown on the Plans. Saw cut where shown on the Plans.
- b. Disposal.** Excavated pavement material becomes the property of the Owner. Remove excavated material to an approved disposal site on airport property in accordance with applicable Federal and State regulations.
- c. Drainage.** Maintain drainage at all times. Install temporary drains and drainage ditches to intercept or divert surface water that may affect the prosecution or condition of the work.

METHOD OF MEASUREMENT

101-3.1 The unit of measurement for pavement removal shall be the number of square yards removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment.

BASIS OF PAYMENT

101-4.1 Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and disposal of removed material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item P-101a Pavement Removal – Square Yard

ITEM P-152 EXCAVATION AND EMBANKMENT

DESCRIPTION

152-1.1 This item consists of excavation, hauling, embankment (or waste disposal), placement, grading and compaction of all materials required construct embankments, roadways and other work. Construct according to the specifications, and conform to the dimensions and typical sections shown on the Plans.

MATERIALS

152-2.1 MATERIAL DEFINITIONS. The Contract will designate material to be removed from within the project lines and grades as classified excavation (common, rock or muck) or as unclassified excavation. Material obtained from outside the project lines and grades is borrow.

All material shall be described as defined below, but no quantity of material shall be defined or paid in more than one category:

- a. **Unclassified Excavation.** All material, regardless of its nature, which is not paid for under another contract item. May include common, rock or muck.

152-2.2 UNSUITABLE MATERIAL. Material that does not meet the testing requirement for suitable material. Material containing vegetable or organic matter, such as muck, peat, organic silt, or sod is considered unsuitable for use in embankment construction. Material that is contaminated by hazardous substances, including fuel or oil, in greater quantity than state and federal standards allow is considered unsuitable for use.

152-2.3 SUITABLE MATERIAL. Suitable material may be obtained from classified excavation, unclassified excavation, or borrow. The Engineer will approve material as "suitable" for use in embankment when the material meets the following criteria:

- a. Sand, rock, gravel, silt, concrete, asphalt pavement, and other inorganic material;
- b. Gradation of 100% by weight passing 6 inch screen; and
- c. Meets the definition of Non-Frost Susceptible according to the definition provided in FAA AC 150/5370-10G.

The Engineer may, in their discretion, approve oversize material as "suitable" for use in embankments outside of the roadway when the material meets the following criteria:

- a. Sand, rock, gravel, silt, concrete, asphalt pavement, and other inorganic material;
- b. Stones measuring no more than 12-inches in any direction;
- c. Meets the definition of Non-Frost Susceptible according to the definition provided in FAA AC 150/5370-10G.; and
- d. Rock is well graded with an even distribution of rock sizes, and can be compacted with a minimal amount of voids.

CONSTRUCTION METHODS

152-3.1 GENERAL. Perform all necessary construction surveying in accordance with Item G-135, including staking of lines and grades, prior to beginning excavation, grading, and embankment operations in any area.

The suitability of material to be placed in embankments shall be subject to approval by the Engineer. Material with organics, when approved by the Engineer as suitable to support vegetation, may be used on top of the embankment slope.

Excess Suitable or Unsuitable material shall be disposed of in waste areas shown on the Plans or in locations acceptable to the Engineer. Material contaminated by hazardous substances shall require special handling and disposal, performed according to Section 01 7000 GENERAL CONDITIONS OF THE CONTRACT, Article 10.3 HAZARDOUS MATERIALS and using methods acceptable to the Engineer.

- a. **Staging Areas.** All staging areas used for the stockpile or storage of excavated or embankment materials shall be graded to allow positive drainage of the area and of adjacent areas.

All staging areas shall be protected from erosion according to the SWPPP or BMP Plan as applicable. Areas where seeding is called for, in which the top layer of soil material has become compacted, by hauling or other activities of the Contractor shall be scarified and disked to a depth of 4 inches, in order to loosen and pulverize the soil.

152-3.2 EXCAVATION. No excavation shall be started until the Contractor has construction surveyed the work, including staking the lines and grades, and the Engineer has reviewed stakes, elevations and measurements of the ground surface. Only Suitable Material shall be used in the formation of embankments in the area designated on the Plans. All unsuitable material shall be disposed at a contractor provided disposal site.

The Contractor shall obtain all permits required for placing unsuitable material in areas they choose, and which are not covered by CBJ obtained permits. When the Contractor is required to locate a disposal area outside the airport property limits at his/her own expense, he shall obtain and file with the Engineer, permission in writing from the property owner for the use of private property for this purpose. The Contractor shall dispose of all unsuitable material at a Contractor provided disposal site.

When the volume of the Suitable Material exceeds that required to construct the embankments to the grades indicated, the excess material shall be disposed at a Contractor provided disposal site.

The grade shall be maintained so that the surface is well drained at all times. When necessary, temporary drains and drainage ditches shall be installed to intercept or divert surface water that may affect the work. All temporary drains and drainage ditches shall be constructed and maintained according to the SWPPP.

In cuts, all loose or protruding rocks on the back slopes shall be scaled or otherwise removed to line of finished grade of slope. All cut-and-fill slopes shall be uniformly dressed to the slope, cross section, and alignment shown on the Plans or as directed by the Engineer.

- a. **Selective Grading.** When selective grading is required, the more suitable material as designated by the Engineer shall be used in constructing the upper layers of the embankment or pavement structure. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas.
- b. **Undercutting.** Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for runways, taxiways, safety areas, subgrades, roads, shoulders, or any areas intended for turfing shall be excavated to a minimum depth of 12 inches below the subgrade, or to the depth directed by the Engineer. Muck, peat, matted roots, or other yielding material that is unsatisfactory for foundation soil compaction, shall be removed to the depth specified. Unsuitable materials shall be disposed of. The excavated area shall be backfilled with suitable material, obtained from the grading operations or borrow areas and thoroughly compacted as specified. Where rock cuts are made and backfilled with suitable material. Any pockets created in the rock surface shall be drained according to the details shown on the Plans. The material removed will be paid as Unclassified Excavation.
- c. **Overbreak.** Overbreak, including slides, is that portion of any material displaced or loosened beyond the finished work, as planned or authorized by the Engineer. All overbreak shall be graded or removed by the Contractor and disposed of as directed by the Engineer. Payment will not be made for the removal and disposal of overbreak which the Engineer determines as avoidable. Unavoidable overbreak will be paid as Unclassified Excavation and Disposal.
- d. **Removal of Structures and Utilities.** The Contractor shall accomplish the removal of existing structures, utilities and fencing as specified to be removed or demolished. All existing structural foundations shall be excavated and removed to a depth at least 2 feet below the top of subgrade or as indicated on the Plans, and the material disposed of as directed. Holes left after removing foundations shall be backfilled with suitable material and compacted as specified. The material will be paid as Unclassified Excavation and Reinstallation.
- e. **Foundation Soil Compaction Requirements.** In areas of excavation, the top 6 inches of foundation soil under areas serving aircraft or vehicle traffic loadings shall be compacted to a density of not less than 95% of the maximum density as determined by ATM 207 ATM 212, or ATM 309. The in-place field density and moisture content shall be determined according to ATM 213.

Compaction of the foundation soil is a subsidiary cost to excavation.

The Engineer may direct the Contractor to over excavate foundation soil that is soft or compresses excessively, and to backfill excavation with compacted suitable material. The material will be paid as Unclassified Excavation.

Blasting. Blasting will not be permitted on airport property.

152-3.3 BORROW SOURCES. Borrow sources within the airport property if available will be identified on the Plans. Excavation of borrow on airport property shall be made only at these identified locations and within the lines and grades staked.

Borrow sources outside of airport property may be identified in the Contract according to SECTION 00 7000 GENERAL CONDITIONS OF THE CONTRACT, Article 13.10 USE OF THE CBJ GRAVEL PIT". The Contractor shall furnish additional borrow sources if necessary.

Removal of overburden and waste material, permit costs, mineral royalties, and other costs of material source development are subsidiary and shall be included in the unit price for borrow or other classified materials.

152-3.4 EXCAVATION DEWATERING. Excavation Dewatering shall be performed in accordance with Section D-710.

152-3.5 PREPARATION OF EMBANKMENT AREA. Where an embankment is to be constructed to a height of 4 feet or less, or where the embankment paved or surfaced areas, all sod and vegetable matter shall be removed from the surface upon which the embankment is to be placed, and the cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches. Compact this area as indicated in Subsection 152-3.2.e.

When new embankment is placed against existing embankments, the existing ground shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. Benching shall be of sufficient width to permit placing of material and compacting operations. Each horizontal cut shall begin at the intersection of the original ground and the vertical side of the previous bench. Material thus cut out and deemed suitable shall be blended and incorporated into the new embankment, and compacted as specified for the adjacent fill.

No direct payment shall be made for preparation of embankment areas. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-3.6 FORMATION OF EMBANKMENTS. Embankments shall be formed in successive horizontal layers of not more than 8 inches in loose depth for the full width of the cross section, unless otherwise approved by the Engineer.

The grading and compaction operations shall be conducted, and the various soil strata shall be placed, to produce an embankment as shown on the typical cross section or as directed by the Engineer. Materials such as brush, hedge, roots, stumps, grass and other unsuitable material, shall not be incorporated or buried in the embankment.

- a. **Suspension of Operations.** Operations on earthwork shall be suspended at any time when satisfactory results cannot be obtained because of rain, freezing, moisture content or other unsatisfactory conditions of the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide proper surface drainage.
- b. **Soft Foundations.** When embankments are to be constructed across wet or swampy ground, which will not support the weight of heavy hauling and spreading equipment, the Contractor shall use methods of embankment construction, and use hauling and spreading equipment, that will least disturb the soft foundation (defined as having a California Bearing Ratio less than 3). When soft foundations are encountered, and when approved by the Engineer, the lower part of the fill may be constructed by dumping and spreading successive vehicle loads in a uniformly distributed layer of a thickness not greater than that necessary to support the vehicle while placing subsequent layers, after which the remainder of the embankment shall be constructed in layers and compacted as specified. The Contractor shall not be required to compact the soft foundation, and at the Engineer's option, may not be required to clear and grub.

- c. **Moisture.** The material in the layer being placed shall be within $\pm 2\%$ of optimum moisture content before rolling to obtain the prescribed compaction. In order to achieve a uniform moisture content throughout the layer, wetting or drying of the material and manipulation shall be performed when necessary. Should the material be too wet to permit proper compaction or rolling, all work on all of the affected portions of the embankment shall be delayed until the material has dried to the required moisture content. Watering of dry material to obtain the proper moisture content shall be done with approved equipment that will sufficiently distribute the water. Sufficient equipment to furnish the required water shall be available at all times.
- d. **Compaction.** Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density as determined by ATM 207 or ATM 212. Under all areas serving aircraft or vehicle traffic loadings, the embankment shall be compacted to a density of not less than 98% of the maximum density as determined by ATM 207 or ATM 212. The in-place field density and moisture content shall be determined according ATM 202.

Keep dumping and rolling areas separate. Do not cover any layer by another until the proper density is obtained.

During construction of the embankment, the Contractor shall route their equipment at all times, both when loaded and when empty, over the layers as they are placed and shall distribute the travel evenly over the entire width of the embankment. The equipment shall be operated in such a manner that hardpan, cemented gravel, clay, or other chunky soil material will be broken up into small particles and become incorporated with the other material in the layer.

In the construction of embankments, layer placement shall begin in the deepest portion of the fill and progress in layers approximately parallel to the finished pavement grade line. Stones or fragmentary rock larger than 3 inches in their greatest dimensions will not be allowed in the top 6 inches of the embankment.

- e. **Oversize Material.** At the Engineer's discretion and direction, the Contractor may use oversize material or rockfill, as defined in Subsection 152-2.3, in the embankment. Place material in layers up to 18-inches thick. Fill voids with finer material. Level and smooth each layer with suitable leveling equipment. Use compaction equipment and construction methods that can form a dense, well-compacted embankment. Do not use oversize material within 2 feet of the top of finished subgrade.

Rock or boulders larger than 12 inches in thickness shall either be disposed of outside the excavation or embankment areas, in places and in the manner designated by the Engineer.

- f. **Frozen Material.** Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material, unless this construction method is identified in the special provisions, or is part of a Contractor's Progress Schedule that the Engineer has approved.

152-3.7 FINISHING AND PROTECTION OF SUBGRADE. After the subgrade has been substantially completed, the full width shall be conditioned by removing any soft or other unstable material that will not compact properly. The resulting areas and all other low areas, holes or depressions shall be brought to finish subgrade elevation with suitable material. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade, whose top is shaped to the lines and grades shown on the Plans.

Grading of the top of subgrade shall be performed so that it will drain readily. The Contractor shall take all precautions necessary to protect the subgrade from damage. The Contractor shall limit hauling over the finished subgrade to that which is essential for construction purposes.

All ruts, ponds or rough places that develop in a completed subgrade shall be repaired, smoothed and recompacted before another layer is placed on top of the subgrade.

No subbase, or surface course shall be placed on the subgrade until the subgrade has been approved by the Engineer. Erosion and sediment control shall be done according to the SWPPP. Work described in this subsection is subsidiary and shall be included in the contract unit prices.

152-3.8 TOLERANCES. In those areas upon which a subbase or base course is to be placed, the top of the subgrade shall be of such smoothness that, when tested with a 12-foot straightedge applied parallel and at right angles to the centerline, it shall not show any deviation in excess of 1/2 inch, or shall not be more than 0.05 foot from true grade as established by grade hubs or pins. Any deviation in excess of these amounts shall be corrected by loosening, adding, or removing materials; reshaping; and recompacting by watering and rolling.

On Runway Safety Areas, intermediate and other designated areas, the surface shall be of such smoothness that it will not vary more than 0.10 foot from true grade as established by grade hubs. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

METHOD OF MEASUREMENT

152-4.1 The quantity of Unclassified Excavation and Disposal, will be measured in cubic yards of excavated material, measured in its original position. Pay quantities will be computed to the neat lines staked, by the method of average end areas of materials acceptably excavated. Measurement will not include the quantity of materials excavated without authorization beyond project lines and grades, or the quantity of material used for purposes other than those directed or approved by the Engineer. .

The quantity of Unclassified Excavation and Reinstallation, will be measured in cubic yards of excavated material, reinstalled measured complete and in place outside of paved areas. Pay quantities will be computed to the neat lines staked, by the method of average end areas of materials acceptably excavated. Measurement will not include the quantity of materials excavated without authorization beyond project lines and grades, or the quantity of material used for purposes other than those directed or approved by the Engineer. Measurement will include only materials installed and will not include volumes of pipe, vault, and or bedding within the prism.

Unclassified Excavation and Disposal and Unclassified Excavation and Reinstallation include the costs for, excavation, hauling, disposal, placing in layers, compacting, diking, watering, mixing, sloping, grading, and other necessary operations for construction of embankments, are subsidiary and shall be included in the contract unit prices for Unclassified Excavation.

152-4.2 Excavations bedding and backfilling performed for fence foundations, electrical conduit and electrical structures performed outside of the temporary excavation limits as shown on the Plans shall not be included in Unit Price pay items in this Section, but shall be considered subsidiary to fencing and electrical pay items.

No deductions shall be made to the measurement for items associated with this Section for trenching, bedding or backfill of fence foundations, electrical conduit or electrical structure bases installed within excavation or embankment limits as shown on the Plans.

BASIS OF PAYMENT

152-5.1 For Unclassified Excavations payment will be made at the contract unit price per cubic yard. Payment will be made under

Item P-152a	Unclassified Excavation and Disposal – Cubic Yard
Item P-152b	Unclassified Excavation and Reinstallation – Cubic Yard

TESTING REQUIREMENTS

ATM 212	Standard Density of Coarse Granular Materials using the Vibratory Compactor
ATM 207	Moisture-Density Relationship of Soils
ATM 202	Moisture Content of Aggregate and Soils
ATM 213	In-place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods
ATM 304	Sieve Analysis of Fine and Coarse Aggregates

ITEM P-154 SUBBASE COURSE

DESCRIPTION

154-1.1 This item shall consist of a subbase course composed of granular materials constructed on a prepared subgrade or underlying course according to these Specifications, and in conformity with the dimensions and typical cross section shown on the Plans.

MATERIALS

154-2.1 MATERIALS. The subbase material shall consist of hard durable particles or fragments of granular aggregates. This material will be mixed or blended with fine sand, clay, stone dust, or other similar binding or filler materials produced from approved sources. This mixture must be uniform and shall comply with the requirements of these Specifications as to gradation, soil constants, and shall be capable of being compacted into a dense and stable subbase. The material shall be free from vegetable matter, lumps or excessive amounts of clay, and other objectionable or foreign substances.

Aggregate gradation shall meet the requirements of Table 1, determined according to ATM 304.

TABLE 1. AGGREGATE GRADATION REQUIREMENTS

Sieve designation (Square opening)	Percentage by weight passing sieves
4-Inch	100
2-Inch	40 – 80
No. 4	12 – 40
No. 200	0 – 4

The percent passing the No. 200 sieve will be determined on minus 3-inch material.

The portion of the material passing the No. 40 sieve shall have a liquid limit of not more than 25 and a plasticity index of not more than 6 when tested according to ATM 204 and ATM 205.

The gradations shall be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieves, or vice versa.

CONSTRUCTION METHODS

154-3.1 GENERAL. The subbase course shall be placed where designated on the Plans or as directed by the Engineer. The material shall be shaped and thoroughly compacted within the tolerances specified.

Granular subbases which, due to grain sizes or shapes, are not sufficiently stable to support the movement of construction equipment, shall be mechanically stabilized to the depth necessary to provide such stability as directed by the Engineer. The mechanical stabilization shall principally include the addition of a fine-grained medium to bind the particles of the subbase material sufficiently to furnish a bearing strength, so that the course will not deform under the traffic of the construction equipment. The addition of the binding medium to the subbase material shall not increase the soil constants of that material above the limits specified.

154-3.2 PREPARING UNDERLYING COURSE. Before any subbase material is placed, the underlying course shall be prepared and conditioned as specified. The course shall be checked and accepted by the Engineer before placing and spreading operations are started.

To protect the subgrade and to ensure proper drainage, the spreading of the subbase shall begin along the centerline of the pavement on a crowned section or on the high side of pavements with a one-way slope.

154-3.3 MATERIALS ACCEPTANCE IN EXISTING CONDITION. When the entire subbase material is secured in a uniform and satisfactory condition, such approved material may be moved directly to the spreading equipment for placing. The material may be obtained from gravel pits, stockpiles, or may be produced from a crushing and screening plant with the proper blending. The materials from these sources shall meet the requirements for gradation, quality, and consistency. The moisture content of the material shall be approximately that required to obtain maximum density. The final operation shall be blading or dragging, if necessary, to obtain a smooth uniform surface true to line and grade.

154-3.4 GENERAL METHODS FOR PLACING. When materials from several sources are to be blended and mixed, the subbase material, together with any blended material, shall be thoroughly mixed prior to placing on grade.

The subbase course shall be constructed in layers. Any layer shall be not less than 3 inches nor more than 8 inches of compacted thickness. The material, as spread, shall be of uniform gradation with no pockets of fine or coarse materials. No material shall be placed in snow or on a soft, muddy, or frozen course.

When more than one layer is required, the construction procedure described herein shall apply similarly to each layer.

During the placing and spreading, sufficient caution shall be exercised to prevent the incorporation of subgrade, shoulder, or foreign material in the subbase course mixture.

154-3.5 FINISHING AND COMPACTING. After spreading or mixing, the subbase material shall be thoroughly compacted. Sufficient compactors shall be furnished to adequately handle the rate of placing and spreading of the subbase course. The moisture content of the material shall be approximately that required to obtain maximum density.

The field density of the compacted material shall be not less than 98% of the maximum density, as determined according to ATM 207 or ATM 212. The in-place field density and moisture content shall be determined according to ATM 213.

The course shall not be rolled when the underlying course is soft or yielding or when the rolling causes undulation in the subbase. When the rolling develops irregularities that exceed 1/2 inch when tested with a 12-foot straightedge, the irregular surface shall be loosened and then refilled with the same kind of material as that used in constructing the course and again rolled as required above.

Along places inaccessible to rollers, the subbase material shall be tamped thoroughly with mechanical or hand tampers.

Watering during rolling, if necessary, shall be in the amount and by equipment approved by the Engineer. Water shall not be added in such a manner or quantity that free water will reach the underlying layer and cause it to become soft.

154-3.6 SURFACE TEST. After the course is completely compacted, the surface shall be tested for smoothness and accuracy of grade and crown; any portion found to lack the required smoothness or to fail in accuracy of grade or crown shall be scarified, reshaped, recompacted, and otherwise manipulated as the Engineer may direct until the required smoothness and accuracy is obtained. The finished surface shall not vary more than 1/2 inch when tested with a 12-foot straightedge applied parallel with, and at right angles to, the centerline.

154-3.7 PROTECTION. Work on subbase course shall not be conducted during freezing temperature nor when the subgrade is wet. When the subbase material contains frozen material or when the underlying course is frozen, the construction shall be stopped.

154-3.8 MAINTENANCE. Following the final shaping of the material, the subbase shall be maintained throughout its entire length by the use of standard motor graders and rollers until, in the judgment of the Engineer, the subbase meets all requirements and is acceptable for the construction of the next course.

METHOD OF MEASUREMENT

154-4.1 Subbase Course will be measured by the cubic yard of material in place, graded and compacted, as determined by the average end area method, based upon final design template neat lines in accordance with the contract documents and according to SECTION 00 7000 GENERAL CONDITIONS OF THE CONTRACT, Article 9 PAYMENTS AND COMPLETION.

Measurement will not include the quantity of materials placed without authorization beyond project lines and grades, or the quantity of material used for purposes other than those directed or approved by the Engineer.

BASIS OF PAYMENT

154-5.1 Subbase Course will be paid for at the contract price, per unit of measurement, accepted in place.

Hauling and placing of these materials is subsidiary.

Payment will be made under:

Item P-154b Subbase Course – Cubic Yard

TESTING REQUIREMENTS

ATM 212	Standard Density of Coarse Granular Materials using the Vibratory Compactor
ATM 304	Sieve Analysis of Aggregates & Soils
ATM 204	Liquid Limit of Soils
ATM 205	Plastic Limit and Plasticity Index of Soils
ATM 207	Moisture-Density Relationship of Soils
ATM 213	In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods

ITEM P-156 EROSION, SEDIMENT, AND POLLUTION CONTROL

156-1.1 DESCRIPTION. Provide project administration and Work relating to control of erosion, sedimentation, and discharge of pollutants, according to this section and applicable local, state, and federal requirements, including the Alaska Pollutant Discharge Elimination System (APDES) Construction General Permit and Excavation Dewatering Permit. Section 301(a) of the Clean Water Act (CWA) and 18 AAC 83.015 provide that the discharge of pollutants to water of the U.S. is unlawful except in accordance with the permit.

156-1.2 DEFINITIONS.

These definitions apply only to Item P-156.

ACTIVE TREATMENT SYSTEM OPERATOR (ATS). The Contractor's qualified representative who is responsible for maintaining and operating an active treatment system (as defined in the CGP) for storm water runoff.

ALASKA CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (AK-CESCL). A person who has completed training, testing, and other requirements of, and is currently certified as, an AK-CESCL from an AK-CESCL Training Program (a program developed under a Memorandum of Understanding between the Owner and others). The Owner recognizes AK-CESCLs as "qualified personnel" required by the CGP. An AK-CESCL must be recertified every three years.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC). The state agency authorized by EPA to administer the Clean Water Act's National Pollutant Discharge Elimination System.

ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM (APDES). A system administered by DEC that issues and tracks permits for storm water discharges.

BEST MANAGEMENT PRACTICES (BMPs). Temporary or permanent structural and non-structural devices, schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or minimize the discharge of pollutants to waters of the United States. BMPs also include, but are not limited to, treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage.

CLEAN WATER ACT (CWA). Federal Water Pollution Control Amendments of 1972, as amended (33 U.S.C. 1251 et seq.).

CONSTRUCTION ACTIVITY. Physical activity by the Contractor, Subcontractor or utility company; that may result in erosion, sedimentation, or a discharge of pollutants into storm water. Construction Activity includes soil disturbing activities (e.g. clearing, grubbing, grading, excavating); and establishment of construction materials or equipment storage or maintenance areas (e.g. material piles, borrow area, concrete truck chute washdown, fueling); and industrial activities that may discharge storm water and are directly related to the construction process (e.g. concrete or asphalt batch plants).

CONSTRUCTION GENERAL PERMIT (CGP). The permit authorizing storm water discharges from Construction Activities, issued and enforced by DEC. It authorizes stormwater discharges provided permit conditions and water quality standards are met. The CGP document can be found online at:

http://dec.alaska.gov/water/wnpnpc/stormwater/docs/2016_cgp_akr10_final_20151229.pdf

CORPS OF ENGINEERS PERMIT (USACE PERMIT). A U.S. Army Corps of Engineers Permit for construction in waters of the US. Such permit may be issued under Section 10 of the Rivers and Harbors Act of 1899, or Section 404 of the Clean Water Act.

ELECTRONIC NOTICE OF INTENT (ENOI). The electronic Notice of Intent submitted to DEC, to obtain coverage under the CGP or EDP.

ELECTRONIC NOTICE OF TERMINATION (ENOT). The electronic Notice of Termination submitted to DEC, to end coverage under the CGP or EDP.

ENVIRONMENTAL PROTECTION AGENCY (EPA). A federal agency charged to protect human health and the environment.

ERODIBLE STOCKPILE. Any material storage area or stockpile consisting of mineral aggregate, organic material, or a combination thereof, with greater than 5% passing the #200 sieve, and any material storage where wind or water transports sediments or other pollutants from the stockpile. Erodible Stockpile also includes any material storage area or stockpile where the Engineer determines there is potential for wind or water transport of sediments or other pollutants away from the stockpile.

EROSION AND SEDIMENT CONTROL PLAN (ESCP). The Owner's project specific document that illustrates measures to control erosion and sediment on the project. The ESCP provides bidders with the basis for cost estimating and guidance for developing an acceptable Storm Water Pollutant Prevention Plan (SWPPP).

EXCAVATION DEWATERING PERMIT (EDP). The permit authorizing storm water discharges from excavations during construction under, issued and enforced by DEC under certain circumstances. Dewatering discharges eligible for coverage under this general permit consist of water pumped from excavation areas through the use of temporary dewatering wells or submersible pumps to lower the water table to support a construction activity. The dewatering of accumulated groundwater and storm water that accumulates within an excavation area is an authorized discharge under the permit. The permit does provide discharge authorization for dewatering conducted within 1,500 feet of a permit defined "DEC-identified contaminated site" although special permit conditions apply and additional requirements may be added in the discharge authorization. The special conditions will provide assurance that the dewatering activities does not pull contamination from known contaminated sites. The EDP document can be found online at:

http://dec.alaska.gov/water/wnpssc/stormwater/docs/AKG002000_Excavation_Dewatering_GP.pdf

FINAL STABILIZATION. Is defined in Item P-156 as it is defined in the CGP.

HAZARDOUS MATERIAL CONTROL PLAN (HMCP). The Contractor's detailed project specific plan for prevention of pollution from storage, use, transfer, containment, cleanup, and disposal of hazardous material (including, but are not limited to, petroleum products related to construction activities and equipment). The HMCP is included as an appendix to the SWPPP.

IMMEDIATELY. Means no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

INSPECTION. An inspection required by the CGP or the SWPPP, usually performed together by the Contractor's SWPPP Manager and CBJ's Stormwater Inspector.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT. A DEC storm water discharge permit issued to certain local governments and other public bodies, for operation of storm water conveyances and drainage systems. See CGP for further definition.

MULTI-SECTOR GENERAL PERMIT (MSGP). The Alaska Pollutant Discharge Elimination System General Permit for storm water discharges associated with industrial activity.

NON-ERODIBLE STOCKPILE. Any material stockpile identified in the CGP definition for Final Stabilization, Section 1.b, and includes: riprap, gabion backfill, porous backfill, railroad ballast and sub-ballast, ditch lining, or fill material with low erodibility. The stockpile shall not have a gradation of more than 5% passing the #200 sieve unless approved by an Engineer. There shall be no possibility of sediment transport due to water or wind erosion. Crushed aggregate base material as defined in Item P-209 is only considered stable on relatively flat slopes when compacted in accordance with P-209-3.5

OPERATOR(S). The party or co-parties associated with a regulated activity that has responsibility to obtain permit coverage under the CGP. "Operator" for the purpose of the CGP and in the context of storm water associated with construction activity, means any party associated with a construction project that meets either of the following two criteria:

- a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
- b. The party has day to day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

POLLUTANT. Any substance or item meeting the definition of pollutant contained in 40 CFR § 122.2. A partial listing from this definition includes: dredged spoil, solid waste, sediment, sewage, garbage, sewage sludge, chemical wastes, biological materials, wrecked or discarded equipment, rock, sand, cellar dirt and industrial or municipal waste.

PROJECT ZONE. The physical area provided by the Owner for Construction. The Project Zone includes the area of highway or facility under construction, project staging and equipment areas, and material and disposal sites; when those areas, routes and sites, are provided by the Contract.

Material sites, material processing sites, disposal sites, haul routes, staging and equipment storage areas; that are furnished by the Contractor or a commercial operator, are not included in the Project Zone.

RECORDS. Any record, report, information, document or photograph required to be created or maintained pursuant to the requirements of, the CGP, the CGP storm water requirements of the Clean Water Act; and applicable local, state, and federal laws and regulations regarding document preservation.

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN (SPCC PLAN). The Contractor's detailed plan for petroleum spill prevention and control measures, that meet the requirements of 40 CFR 112.

SPILL RESPONSE FIELD REPRESENTATIVE. The Contractor's representative with authority and responsibility for managing, implementing, and executing the HMCP and SPCC Plan.

STORM EVENT. A rainfall event that produces 0.5 inch or more of precipitation in 24 hours and that is separated from the previous storm event by at least 3 days of less than 0.1 inch of rain per day.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP). The Contractor's detailed project specific plan to minimize erosion and contain sediment within the Project Zone, and to prevent discharge of pollutants that exceed applicable water quality standards. The SWPPP includes, but is not limited to, amendments, records of activities, inspection schedules and reports, qualifications of key personnel, and all other documentation, required by the CGP, the EDP and this specification, and other applicable local, state, and federal laws and regulations.

SUBCONTRACTOR SPILL RESPONSE COORDINATOR. The subcontractor's representative with authority and responsibility for coordinating the subcontractor's activities in compliance with the HMCP and SPCC Plan.

SUBCONTRACTOR SWPPP COORDINATOR. The subcontractor's representative with authority to direct the subcontractor's work, and who is responsible for coordination with the Superintendent and SWPPP Manager, and for the subcontractor's compliance with the SWPPP.

SUPERINTENDENT. The Contractor's duly authorized representative in responsible charge of the work. The Superintendent has responsibility and authority for the overall operation of the Project and for Contractor furnished sites and facilities directly related to the Project.

SWPPP AMENDMENT. A revision or document that adds to, deletes from, or modifies the SWPPP.

SWPPP MANAGER. The Contractor's qualified representative who conducts Inspections, updates SWPPP records, and has authority to suspend work and to implement corrective actions required for CGP compliance.

SWPPP PREPARER. The Contractor's qualified representative who is responsible for developing the initial SWPPP.

TEMPORARY STABILIZATION. Protecting soils from erosion and sediment loss by rainfall, snow melt, runoff, or wind with a temporary vegetative and/or non-vegetative protection cover. Temporary stabilization may include a combination of seeding, geotextiles, mulches, surface tackifiers, rolled erosion control products, gravel or paving, or the mentioned BMP's combined together with track walking.

UTILITY SPILL RESPONSE COORDINATOR. The Utility's representative with authority and responsibility for coordinating the Utility's activities in compliance with the HMCP and SPCC Plan.

UTILITY SWPPP COORDINATOR. The Utility's representative with authority to direct the Utility's work, and who is responsible for coordination with the Superintendent and SWPPP Manager, and for the Utility's compliance with the SWPPP.

156-1.3 PLAN AND PERMIT SUBMITTALS.

For all plans required by this Section, use the Contractor submission and CBJ review deadlines identified in Subsection 156-1.3.

Partial and incomplete submittals will not be accepted for review. Any submittal that is re-submitted or revised after submission, but before the review is completed, will restart the submittal review timeline. No additional Contract time or additional compensation will be allowed due to delays caused by partial or incomplete submittals, or required re-submittals.

- a. Storm Water Pollution Prevention Plan (SWPPP).** Submit an electronic copy and three hard copies of the SWPPP to the Engineer for approval. Deliver these documents to the Engineer at least 21 days before beginning Construction Activity. Organize and bind the BMPP and related documents for submittal according to the requirements of Subsection 156-2.1.b.

The CONTRACTOR is responsible to prepare, submit and maintain a SWPPP, as required by the CGP, that is in accordance with their construction methodologies and sequences.

For projects disturbing greater than 1 Acre, this requirement shall include submission of a Notice of Intent (NOI) to ADEC prior to beginning of WORK. Copies of the NOI and SWPPP shall also be submitted to the ENGINEER within 5 days of submittal to ADEC.

For projects disturbing less than 1 acre, the SWPPP shall be submitted to the ENGINEER prior to the beginning of WORK; submittal to ADEC or an NOI are not required. The anticipated disturbed area for this project is less than 1 acre.

The BMP plan associated with the Excavation Dewatering permit shall be a separate submittal, but shall be referenced in the SWPPP. See Section D-710.

- b. Hazardous Material Control Plan.** The HMCP Template can be found at the following webpage: http://www.dot.state.ak.us/stwddes/dcsconst/pop_constforms.shtml. Submit an electronic copy and three hard copies of the HMCP, as an appendix to the SWPPP, to the Engineer for approval. The HMCP submittal and review timeline, and signature requirements are the same as the SWPPP.
- c. Spill Prevention, Control and Countermeasure Plan.** When a SPCC Plan is required under Subsection 156-2.3, submit an electronic copy and three signed hard copies of the SPCC Plan to the Engineer. Deliver these documents to the Engineer at least 21 days before beginning Construction Activity. The Owner reserves the right to review the SPCC Plan and require modifications.
- d. General Permit Coverage.** The Contractor is responsible for permitting of Contractor and subcontractor Construction Activities related to the Project. Do not use the BMPP for Construction Activities outside the Project Zone where the Owner is not an operator. See Section D-710.

Do not begin Construction Activity until the preconstruction conditions described herein and in Section D-710 are completed.

156-1.4 PERSONNEL QUALIFICATIONS. Provide documentation in the SWPPP that the individuals serving in these positions meet the personnel qualifications.

- a.** The SWPPP Preparer must meet at least one of the following qualifications:
 - (1) Current certification as a Certified Professional in Erosion and Sediment Control (CPESC);
 - (2) Current certification as AK-CESCL, and at least two years' experience in erosion and sediment control, as a SWPPP Manager or SWPPP writer, or equivalent. Provide documentation including project names, project timelines, and work responsibilities demonstrating the experience requirement;
 - (3) Professional Engineer registered in the State of Alaska with current certification as AK-CESCL; or
 - (4) For Projects disturbing more than 20 acres, the SWPPP Preparer must also have completed a SWPPP Preparation course.
- b.** The Superintendent must meet the following qualifications:
 - (1) Current certification as AK-CESCL; and
 - (2) Duly authorized representative, as defined in the CGP, Appendix A, Part 1.12.3.
- c.** The SWPPP Manager must have current certification as AK-CESCL and must meet the CGP experience, training, and authority requirements identified for the Storm Water Lead and Storm Water Inspector positions as defined in the CGP, Appendix C, Qualified Person.

- d. The ATS operator, as defined in CGP Appendix C Definitions, Qualified Person, must have current certification as AK-CESCL, and be knowledgeable in the principals and practices of treatment systems in general, and the operation of the project-specific ATS. The ATS operator must have at least three months field experience with ATS, or completion of an ATS manufacturer's training course, or completion of system operators certification course.
- e. The Owner accepts people having any of the following certificates as equivalent to AK-CESCL, if the certificates are current according to the sponsoring organization's policies:
 - (1) CPESC, Certified Professional in Erosion and Sediment Control; or
 - (2) CISEC, Certified Inspector in Sediment and Erosion Control.

156-1.6 RESPONSIBILITY FOR STORM WATER PERMIT COVERAGE.

- a. The Owner and the Contractor are jointly responsible for permitting and permit compliance within the Project Zone.
- b. The Contractor is responsible for permitting and permit compliance outside the Project Zone. The Contractor has sole responsibility for compliance with DEC, USACE, and other applicable federal, state, and local requirements, and for securing all necessary clearances, rights, and permits. Section 01 5000 describes the requirement to obtain permits, and to provide permit documents to the Engineer.
- c. An entity that owns or operates, a commercial plant or material source or disposal site outside the Project Zone, is responsible for permitting and permit compliance. The Contractor has sole responsibility to verify that the entity has appropriate permit coverage. Section 01 5000 describes the requirement to obtain permits, and to provide permit documents to the Engineer.
- d. The Owner is not responsible for permitting or permit compliance, and is not liable for fines resulting from noncompliance with permit conditions:
 - (1) For areas outside the Project Zone;
 - (2) For Construction Activity and Support Activities outside the Project Zone; and
 - (3) For commercial plants, commercial material sources, and commercial disposal sites.

156-2.1 STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS.

- a. WORK at the Project site will not be permitted until the above documents are submitted to the ENGINEER and acceptance of this plan has been obtained from the governing agency or agencies (if required by the CGP).
- b. The CONTRACTOR shall install temporary erosion control structures and devices as required by their SWPPP, prepared in accordance with the ADEC CGP. They shall be maintained in effective operating condition at all times. Prior to completion of work, the CONTRACTOR shall clean and remove all silt and debris from the settling pond and check dams.
- c. 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.
- d. The CONTRACTOR shall be responsible for meeting the requirements of all permits (including permits naming the OWNER, or other parties); therefore, shall be responsible for the quality of

the run-off water from the Project site and for any fines and/or penalties resulting from the construction operation.

- e. The CONTRACTOR shall submit NOT (Notice of Termination) at completion of the WORK and removal of all SWPPP items.

f. Considerations and Contents.

Review the ESCP in the appendices.

156-2.2 HAZARDOUS MATERIAL CONTROL PLAN (HMCP) REQUIREMENTS.

Prepare the HMCP using the DOT&PF template located at the following DOT&PF link; (http://www.dot.state.ak.us/stwddes/dcsconst/pop_constforms.shtml) for prevention of pollution from storage, use, containment, cleanup, and disposal of all hazardous material, including petroleum products related to construction activities and equipment. Include the HMCP as an appendix to the SWPPP. Compile Material Safety Data Sheets in one location and reference that location in the HMCP.

Designate a Contractor's Spill Response Field Representative with 24 hour contact information. Designate a Subcontractor Spill Response Coordinator for each subcontractor. The Superintendent and Contractor's Spill Response Field Representative must have 24 hour contact information for each Subcontractor Spill Response Coordinator and the Utility Spill Response Coordinator.

List and give the location and estimated quantities of hazardous materials (Including materials or substances listed in 40 CFR 117 and 302, and petroleum products) to be used or stored on the Project. Hazardous materials must be stored in covered storage areas. Include secondary containment for all hazardous material storage areas.

Identify the locations where fueling and maintenance activities will take place, describe the activities, and list controls to prevent the accidental spillage of petroleum products and other hazardous materials. Controls include placing absorbent pads or other suitable containment under fill ports while fueling, under equipment during maintenance or repairs, and under leaky equipment.

List the types and approximate quantities of response equipment and cleanup materials available on the Project. Include a list and location map of cleanup materials, at each different work site and readily available off site (materials sources, material processing sites, disposal sites, staging areas, etc). Spill response materials must be stored in sufficient quantity at each work location, appropriate to the hazards associated with that site.

Describe procedures for containment and cleanup of hazardous materials. Describe a plan for the prevention, containment, cleanup, and disposal of soil and water contaminated by spills. Describe a plan for dealing with contaminated soil and water encountered during construction. Clean up spills or contaminated surfaces immediately.

Describe methods of disposing of waste petroleum products and other hazardous materials generated by the Project, including routine maintenance. Identify haul methods and final disposal areas. Assure final disposal areas are permitted for hazardous material disposal.

Describe methods of complying with the requirements of AS 46.04.010-900, Oil and Hazardous Substances Pollution Control, and 18 AAC 75. Include contact information for reporting hazardous materials and petroleum product spills to the Project Engineer and reporting to federal, state and local agencies.

156-2.3 SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN (SPCC Plan) REQUIREMENTS.

Prepare and implement an SPCC Plan when required by 40 CFR 112; when both of the following conditions are present on the Project:

- a. Oil or petroleum products from a spill may reach navigable waters (as defined in 40 CFR 112); and
- b. Total above ground storage capacity for oil and any petroleum products is greater than 1,320 gallons (not including onboard tanks for fuel or hydraulic fluid used primarily to power the movement of a motor vehicle or ancillary onboard oil-filled operational equipment, and not including containers with a storage capacity of less than 55 gallons)

Reference the SPCC Plan in the HMCP and SWPPP.

156-2.4 RESPONSIBILITY AND AUTHORITY OF THE SUPERINTENDENT AND SWPPP MANAGER.

The Superintendent is responsible for the overall operation of the Project and all Contractor furnished sites and facilities directly related to the Project. The Superintendent shall sign and certify the, Inspection Reports, and other reports required by the EDP, except the NOI and NOT, Reference Section D-710 and the Appendices. The Superintendent may not delegate the task or responsibility of signing and certifying the BMPP submitted under Subsection 156-1.3.a, Inspection Reports, and other reports required by the EDP.

The Superintendent and SWPPP Manager shall be knowledgeable in the requirements of this Item P-156, the SWPPP, CGP, BMPs, HMCP, SPCC Plan, environmental permits, environmental commitments, and historic preservation commitments.

The Superintendent and SWPPP Manager shall have the Contractor's complete authority and be responsible for suspending construction activities that do not conform to the BMPP or EDP.

156-2.5 MATERIALS.

Use materials suitable to withstand hydraulic, wind, and soil forces, and to control erosion and trap sediments according to the requirements of the CGP, EDP and the Specifications.

156-2.6 CONTRACTOR REQUIREMENTS.

The Contractor must be familiar with the conditions and requirements of the CGP and EDP because Contractor's employees will be conducting duties that relate to compliance with the CGP and EDP.

156-3.1 CONSTRUCTION REQUIREMENTS.

Comply with the CGP, EDP and these specifications.

a. Before Construction Activity may Begin.

Complete all of the following before Construction Activities begins.

- (1) Get approval of the SWPPP from the Engineer
- (2) Get authorization from the Engineer to begin;
- (3) Complete EDP Requirements in accordance with Section D-710 including the Project eNOIs for the Owner and for the Contractor, as well as any other eNOIs if there are additional operators, are listed as Active Status on the DEC website;

- (4) Submit (when required) the CBJ approved SWPPP to DEC and Local Government;
- (5) Transmit to the Engineer an electronic copy of the approved SWPPP.
- (6) Delegation of Authority Form (25D-108 and 25D-107) for both the Contractor and CBJ Engineer are signed.
- (7) Post notices. Include the following information:
 - (a) Copy of all eNOIs related to this project;
 - (b) Location of the SWPPP.

Post notices on the outside wall of the Contractor's project office, and near the main entrances of the construction project. Protect postings from the weather. Locate postings so the public can safely read them without obstructing construction activities or the traveling public (for example, at an existing pullout). Do not use retroreflective signs for the SWPPP posting. Do not locate SWPPP signs in locations where the signs may be confused with traffic control signs or devices. Update the notices if the listed information changes.
- (8) Delineate the site for both land disturbing activities and areas that will be left undisturbed.
- (9) Install perimeter controls, sediment controls, and other BMPs that must be placed prior to the initiation of Construction Activity.

b. During Construction.

Before subcontractors or utility companies begin soil disturbing activities, provide to them copies of applicable portions of the SWPPP, and require them to sign a SWPPP Subcontractor Certification, Form 25D-105. Include SWPPP Subcontractor Certifications as an appendix to the SWPPP. Ensure subcontractors and utility companies understand and comply with the SWPPP and the CGP. Inform subcontractors and utility companies of SWPPP amendments that affect them in a timely manner. Coordinate with subcontractors and utility companies doing work in the Project Zone so BMPs, including temporary and permanent stabilization are installed, maintained, and protected from damage.

Provide on-going training to employees and subcontractors, on control measures at the site and applicable storm water pollution prevention procedures. Training must be specific to the installation, maintenance, protection, and removal of control measures CGP 4.14. Training must be given at a frequency that will be adequate to ensure proper implementation and protection of control measures, and no less frequently than once a month during construction activity. Document on the SWPPP Training Log, Form 25D-125, the dates and attendees to these trainings. Include the SWPPP Training Log as an appendix to the SWPPP.

Notify the Engineer immediately if the actions of any utility company or subcontractor do not comply with the SWPPP and the CGP.

Comply with SECTION 00 7000 GENERAL CONDITIONS OF THE CONTRACT, Article 10 PROTECTION OF PERSONS AND PROPERTY. Concrete washout must be fully contained.

Comply with CGP Part 4.8.2 for fueling and maintenance activities. Place absorbent pads or other suitable containment under fill ports while fueling, under equipment during maintenance or repairs, and under leaky equipment.

Comply with requirements of the HMCP and SPCC Plan, and all local, state and federal regulations that pertain to the handling, storage, containment, cleanup, and disposal of petroleum products or other hazardous materials.

Keep the SWPPP and HMCP current (refer to Subsection 156-2.1.c, SWPPP Considerations and Contents)

c. Pollutant and Hazardous Materials Reporting Requirements.

If there has been an incident of non-compliance with the CGP that may endanger health or the environment, immediately report the incident to the Engineer and the Regional Stormwater Specialist, who will determine if reporting to the DEC is required according to the CGP, Appendix A, Part 3.0. Notify the Engineer immediately and, to the extent possible, coordinate reports to DEC with the Engineer. The report will be made by the Regional Stormwater Specialist and must include:

- (1) A description of the noncompliance and its causes;
- (2) The exact dates and times of noncompliance ;
- (3) If not yet corrected the anticipated time the project will be brought back into compliance; and
- (4) The corrective action taken or planned to reduce, eliminate and prevent reoccurrence.

Notify the Engineer immediately if there is an incident of non-compliance with USACE Permits.

Report spills of petroleum products or other hazardous materials to the Engineer and other agencies as required by law. Use the HMCP and SPCC Plan (if available) for contact information to report spills to regulatory agencies.

d. Corrective Action and Maintenance of BMPs.

Implement maintenance as required by the EDP, CGP, SWPPP, and manufacturer's specifications, whichever is more restrictive.

(1) Implement corrective action:

- (a) If an incident of non-compliance with the SWPPP, or CGP is identified;
- (b) If an Inspection or the Engineer identifies the SWPPP or any part of the SWPPP is ineffective in preventing erosion, sedimentation or the discharge of pollutants;
- (c) If a required BMP was not installed according to the SWPPP schedule or phasing, or was installed incorrectly, or was not installed according to the CGP Part 4.0;
- (d) If a BMP is not operating as intended, has not been maintained in an effective operation condition, or is unable to effectively perform the intended function;
- (e) If a prohibited discharge of pollutants, as specified in CGP Part 4.7, is occurring or will occur; or
- (f) If there is accumulation of sediment or other pollutants, that is in or near any storm water conveyance channels, or that may enter a discharge point or storm sewer system. If there is accumulation of sediment or other pollutants that is being tracked outside the project zone.

(2) Implement corrective actions so that they comply with the following time requirement:

- (a)** For conditions that are easily remedied (i.e. removal of tracked sediment, maintenance of control measure, or spill clean-up), initiate corrective action within 24 hours and complete as soon as possible;
- (b)** If installation of a new control measure is needed or an existing control measure requires redesign and reconstruction or replacement to make it operational, the corrective action must be completed within seven calendar days from the time discovered.
- (c)** For all other conditions initiate corrective actions so both of the following requirements are met:
 - 1. Corrective action is completed in time to protect water quality; and
 - 2. Corrective action is completed no later than the Complete-by-Date that was entered in an Inspection Report (see Subsection 156-3.3.b for more information).

If a corrective action is not implemented within the time requirements of this section, document the situation in the SWPPP, notify the Engineer and implement corrective action as soon as possible.

If a corrective action could affect a subcontractor, notify the subcontractor within three days of taking the corrective action. Require in your written subcontract, that subcontractors must notify the Contractor within 24 hours of becoming aware of a condition that requires a corrective action.

e. Stabilization.

Stabilization may be accomplished using temporary or permanent measures. Initiate stabilization of disturbed soils, erodible stockpiles, disposal sites, and of erodible aggregate layers so that all of the following conditions are satisfied:

- (1) Immediately;
- (2) As soon as necessary to avoid erosion, sedimentation, or the discharge of pollutants; and
- (3) As identified in the SWPPP.

Land may be disturbed and stabilized multiple times during a project. Coordinate work to minimize the amount of disturbed soil at any one time. Do not disturb more soil than you can stabilize with the resources available.

Temporarily stabilize from wind and water erosion portions of disturbed soils, portions of stockpiles, and portions of disposal sites, that are not in active construction. Temporary stabilization measures may require a combination of measures including but not limited to vegetative cover, mulch, stabilizing emulsions, blankets, mats, soil binders, non-erodible cover, dust palliatives, or other approved methods.

When temporary or permanent seeding is required, provide a working hydro seeding equipment located within 100 miles of the project by road; with 1,000 gallon or more tank capacity, paddle agitation of tank, and the capability to reach the seed areas with an uniform mixture of water, seed, mulch and tackifier. If the project is located in an isolated community the hydro-seeder must be located at the project.

Before applying temporary or permanent seeding, prepare the surface to be seeded to reduce erosion potential and to facilitate germination and growth of vegetative cover. Apply seed and maintain seeded areas. Reseed areas where growth of temporary vegetative cover is inadequate to stabilize disturbed ground.

Apply permanent seed according to Item T-901 within the time periods allowed by the contract, at locations where seeding is indicated on the plans and after land-disturbing activity is permanently ceased.

When installing a culvert or other drainage structure where stream bypass is not used, install temporary or permanent stabilization concurrently or immediately after placing the culvert or drainage structure in a manner that complies with the SWPPP, applicable project permits and prevents discharge of pollutants. Install temporary and permanent stabilization:

- (1) At the culvert or drainage structure inlet and outlet; and
- (2) In the areas upstream and downstream that may be disturbed by the process of installing the culvert, culvert end walls, culvert end sections, or drainage structure.

Before deactivating a stream bypass or stream diversion used for construction of a bridge, culvert, or drainage structure, install permanent stabilization:

- (1) At the inlet and outlet of the culvert, drainage structure, or bridge;
- (2) In the area upstream and downstream of the culvert, drainage structure, or bridge, that is disturbed during installation or construction of the culvert, drainage structure, or bridge; and
- (3) Under the bridge.

Within seven (7) days of initiating final stabilization, either complete final stabilization or continue maintenance of work until final stabilization is complete.

f. Ending CGP Coverage and BMP Maintenance.

The Engineer will determine the date that all the following conditions for ending CGP coverage have been met within the Project Zone:

- (1) Land disturbing activities have ceased;
- (2) Final Stabilization has been achieved on all portions of the Project Zone, in accordance with CGP Part 4.5.2 (including at CBJ furnished material sources, disposal sites, staging areas, equipment areas, etc.); and
- (3) Temporary BMPs have been removed.

After the Engineer has determined the conditions for ending CGP coverage have been met, the Owner will:

- (1) Send written notice to the Contractor with the date that the conditions were met;

The Contractor must indicate in the SWPPP the areas that have reached Final Stabilization, and the dates land disturbing activities ended and Final Stabilization was achieved.

The Contractor is responsible for coordinating local government inspections of work and ending permit coverage with local government. See Subsection 156-1.3.e for more information.

g. Transmit final SWPPP.

Transmit one copy of the final SWPPP, including all amendments, appendices and maps, to the Engineer.

156-3.2 SWPPP DOCUMENTS, LOCATION ON-SITE, AVAILABILITY, AND RECORD RETENTION.

The SWPPP and related documents maintained by the Contractor are the Record for demonstrating compliance with the CGP. Copies of SWPPP documents transmitted to the Engineer under the requirements of this specification are informational and do not relieve the Contractor's responsibility to maintain complete records as required by the CGP and this specification.

Keep the SWPPP, HMCP and SPCC Plan at the on-site project office. If there is not an on-site project office, keep the documents at a locally available location that meets CGP requirements and is approved by the Engineer. Records may be moved to another office for record retention after the NOTs are filed. Records may be moved to another office during winter shutdown. Update on-site postings if records are relocated during winter shutdown. Provide the CBJ with copies of all Records.

Retain Records and a copy of the SWPPP, for at least three years after the date of NOT. If EPA or DEC inspects the project, issues a Notice of Violation (NOV), or begins investigation for a potential NOV before the retention period expires, retain the SWPPP and all Records related to the SWPPP and CGP until at least three years after EPA and/or DEC has determined all issues related to the investigation are settled.

The SWPPP and related documents must be made available for review and copy, to the CBJ and other regulatory agencies that request them. See CGP Parts 5.10, 6.6 and 9. 5.

156-3.3 SWPPP INSPECTIONS, AMENDMENTS, REPORTS, AND LOGS.

Perform Inspections, prepare Inspection Reports, and prepare SWPPP Amendments in compliance with the SWPPP and as directed by the Engineer.

a. Inspection during Construction.

Conduct Inspections according to the schedule and requirements of the SWPPP and CGP.

Inspections required by the CGP and SWPPP must be performed by the Contractor's SWPPP Manager and the CBJ's Stormwater Inspector jointly, unless impracticable. For this paragraph, "impracticable" means when both inspectors must fly to a remote area in the winter or when one inspector is sick or unable to travel to the site due to weather. When this is the case, the Operator who conducts the Inspection must provide a copy of the Inspection Report to the other Operator within three days of the Inspection date and document the date of the report transmittal.

b. Inspection before Project Completion.

Conduct Inspection to ensure Final Stabilization is complete throughout the Project, and temporary BMPs that are required to be removed are removed. Temporary BMPs that are biodegradable and are specifically designed and installed with the intent of remaining in place until they degrade, may remain in place after project completion with the Engineer's approval.

c. Items and Areas to Inspect.

Conduct Inspections of the areas required by the CGP, EDP and SWPPP.

d. SWPPP Amendments and SWPPP Amendment Log.

The Superintendent and the SWPPP Manager are the only persons authorized to amend the SWPPP and update the SWPPP Amendment Log. The Superintendent or the SWPPP Manager must sign and date amendments to the SWPPP and updates to the SWPPP Amendment Log.

SWPPP Amendments must be approved by the Engineer.

Amendments must occur:

- (1) Whenever there is a change in design, construction operation, or maintenance at the construction site that has or could cause erosion, sedimentation or the discharge of pollutants that has not been previously addressed in the SWPPP;
- (2) If an Inspection identifies that any portion of the SWPPP is ineffective in preventing erosion, sedimentation, or the discharge of pollutants;
- (3) Whenever an Inspection identifies a problem that requires additional or modified BMPs
- (4) Whenever a BMP is modified during construction, or a BMP not shown in the original SWPPP is added;
- (5) If the Inspection frequency is modified (note beginning and ending dates); or
- (6) When there is a change in personnel who are named in the SWPPP, according to Subsection 156-2.1.d.

Amend the SWPPP narrative as soon as practicable after any change or modification, but in no case, later than seven days following identification of the need for an amendment. Every SWPPP Amendment must be signed and dated. Cross-reference the amendment number with the Corrective Action Log or SWPPP page number, as applicable. When a BMP is modified or added, describe the BMP according to Subsection 156-2.1.c.

Keep the SWPPP Amendment Log current. Prior to performing each scheduled Inspection, submit to the Engineer a copy of the pages of the Amendment Log that contain new entries since the last submittal. Include copies of any documents amending the SWPPP.

Keep the SWPPP Amendment Log as an appendix to the SWPPP.

e. Site Maps.

Document installation, routine maintenance, and removal of BMPs by making notes on the SWPPP Site Maps. Include the date and the recording person's initials by these notes. Identify any Public Water Systems (PWS) and drinking water protection areas (DWPA) per CGP Part 4.10. Identify areas where Construction Activities which cause soil disturbance begin, areas where Construction Activities which cause soil disturbance temporarily or permanently cease, and areas that are temporarily or permanently stabilized.

f. Corrective Action Log.

The Superintendent and SWPPP Manager are the only persons authorized to make entries on the SWPPP Corrective Action Log, Form 25D-112. Document the need for corrective action within 24 hours of either:

- (1) Identification during an inspection; or
- (2) Discovery by the CBJ's or Contractor's staff, a subcontractor, or a regulatory agency inspector.

Modification or replacement of a BMP, installation of a new BMP not shown in the original SWPPP, routine maintenance, or overdue maintenance is a corrective action and must be documented on the Corrective Action Log. Maintenance is considered overdue under any of the following conditions:

- (1) Accumulated sediment in sediment basins, including sediment traps and ponds, exceeds 50% of design capacity.
- (2) Sediment accumulates to more than a third of the above ground height of silt fence protecting water bodies.
- (3) Sediment accumulates to more than half of the above ground height of storm water inlets, check dams, berms, or silt fence not protecting water bodies.

Within 24 hours of discovery, update the Corrective Action Log, Form 25D-112, with the date of discovery and proposed corrective action. If discovered during an inspection, update log with inspection date and proposed corrective actions noted on the Inspection Report. If discovered outside of an inspection, update the log with the date of discovery, the proposed corrective action, and the date the corrective action was completed..

After the corrective action has been accomplished, note in the Corrective Action Log the action taken and if a SWPPP amendment was needed. Date and initial the entry.

Keep the Corrective Action Log current and submit a copy to the Engineer prior to performing each scheduled SWPPP Inspection.

Keep the Corrective Action Log as an appendix to the SWPPP.

g. Grading and Stabilization Activities Log.

The Superintendent and SWPPP Manager are the only persons authorized to date and initial entries on the SWPPP Grading and Stabilization Activities Log, Form 25D-110. Use the SWPPP Grading and Stabilization Activities Log, to record land disturbance and stabilization activities.

Keep the Grading and Stabilization Activities Log current and submit a copy to the Engineer prior to performing each scheduled SWPPP Inspection. Keep the Grading and Stabilization Activities Log organized and completed to demonstrate compliance with the CGP Part 4.5.

Keep the Grading and Stabilization Activities Log as an appendix to the SWPPP.

h. Staff Tracking Log.

Use the SWPPP Staff Tracking Log, Form 25D-127, to keep staff records current. Include records of the AK-CESCL or equivalent qualifications for the Superintendent, SWPPP Manager, ATS operator, any acting Superintendent and acting SWPPP Managers, and beginning and end dates for temporary personnel assignments related to administration of the CGP or Section P-156. Update the SWPPP Staff Tracking Log within 24 hours of any changes in personnel, qualifications, or other staffing items related to administration of the CGP or Section P-156.

156-3.4 FAILURE TO PERFORM WORK.

The Engineer has authority to suspend work and withhold monies, for an incident of non-compliance with the CGP or SWPPP, that may endanger health or the environment or for failure to perform work related to Section P-156.

a. Non-compliance.

- (1) **Incidents of Non-compliance.** Failure to:
 - (a) Obtain appropriate permits before Construction Activities occur;
 - (b) Perform EDP, BMPP, ESCP Administration;
 - (c) Perform timely Inspections;
 - (d) Update the BMPP;
 - (e) Transmit updated BMPP, Inspection Reports, sampling results, and other updated BMPP forms to the Engineer;
 - (f) Maintain effective BMPs to control erosion, sedimentation, and pollution in accordance with the BMPP, the EDP, and applicable local, state, and federal requirements;
 - (g) Perform duties according to the requirements of Section P-156;
 - (h) Meet requirements of permits, laws, and regulations related to erosion, sediment, or pollution control; and
- (2) **Notice of non-compliance**, either oral or written will include:
 - (a) Reason/defects
 - (b) Corrective actions required
 - (c) Time allowed for completing the corrective action
- (3) **Levels of Non-compliance and Response** correspond with harm to the workers, the public or the environment and whether the harm is:
 - (a) **Not-imminent**, the Engineer will either orally or in writing, or both, provide notice to the Contractor indicating the incident of non-compliance. Contractor's that take corrective action and complete the action to the satisfaction of the Engineer, within the time specified, may return to the status of compliance, and avoid elevating the response to imminent.
 - (b) **Imminent**, the Engineer will orally provide notice to the Contractor of non-compliance and promptly provide written notice to suspend work until corrective action is completed. No additional Contract time or additional compensation will be allowed due to delays caused by the Engineer's suspension of work.
 - (c) Additional actions, taken against the Contract whether the level of non-compliance is Not-imminent or Imminent, may include:
 - Withholding monies until corrective action is completed
 - Assessing damages or equitable adjustments
 - Employing others to perform the corrective action and deduct the cost

156-3.5 ACCESS TO WORK.

The Project, including any related off-site areas or support activities, must be made available for inspection, or sampling and monitoring, by the CBJ and other regulatory agencies.

156-4.1 METHOD OF MEASUREMENT. P-156-5.1, and as follows:

Items P-156a, and P-156b, are lump sum.

156-5.1 BASIS OF PAYMENT.

Item P-156a Erosion, Sediment and Pollution Control Administration. At the Contract lump sum price for administration of all work under this Section. Includes, but is not limited to, SWPPP and HMCP and SPCC Plan preparation, agency fees for SWPPP reviews, SWPPP amendments, pre-construction Inspections, Inspections, monitoring, reporting, and Record keeping or copying Records related to the SWPPP and required by the CGP, and Record retention.

Item P-156b Temporary Erosion, Sediment and Pollution Control. At the contingent sum prices specified for all labor, supervision, material, equipment, and incidentals to install, maintain, remove and dispose of approved temporary erosion, sedimentation, and pollution control BMPs required to implement the SWPPP and SPCC Plan.

Subsidiary Items. Temporary erosion, sediment and pollution control measures that are required outside the Project Zone are subsidiary. Work required by the HMCP and SPCC Plan including hazardous material storage, containment, removal, cleanup and disposal, are subsidiary to Item P-156a Erosion, Sediment and Pollution Control Administration.

Work under other pay items. Work that is paid for directly or indirectly under other pay items will not be measured and paid for under Section 156. This work includes but is not limited to:

- a. Dewatering and associate EDP activities including sampling and reporting shall be paid under item D-710.
- b. Shoring;
- c. Bailing;
- d. Permanent seeding;
- e. Installation and removal of temporary work pads;
- f. Temporary accesses;
- g. Temporary drainage pipes and structures;
- h. Diversion channels;
- i. Settling impoundment; and
- j. Filtration.

Permanent erosion, sediment and pollution control measures will be measured and paid for under other Contract items, when shown on the bid schedule.

Work at the Contractor's Expense. Temporary erosion, sediment and pollution control measures that are required due to carelessness, negligence, or failure to install temporary or permanent controls as scheduled or ordered by the Engineer, or for the Contractor's convenience, are at the Contractor's expense.

Payment will be made under:

PAY ITEM		PAY UNIT
P-156a	Erosion, Sediment and Pollution Control Administration	Lump Sum
P-156b	Temporary Erosion, Sediment and Pollution Control	Lump Sum

ITEM P-209 CRUSHED AGGREGATE BASE COURSE

DESCRIPTION

209-1.1 This item consists of a base course composed of crushed aggregates constructed on a prepared course according to these Specifications and to the dimensions and typical cross section shown on the Plans.

MATERIALS

209-2.1 CRUSHED AGGREGATE BASE. Crushed aggregates shall consist of clean, sound, durable particles of crushed stone or crushed gravel and shall be free from organic matter, excess coatings of clay, silt, and other objectionable materials and shall contain no clay lumps balls.

Fine aggregate passing the No. 4 sieve shall consist of fines from the crushing operation. If necessary, fine aggregate may be added to produce the correct gradation. The fine aggregate shall be produced by crushing stone and gravel that meet the coarse aggregate requirements for wear and soundness.

The crushed aggregate portion which is retained on the No. 4 sieve shall have at least 70% by weight with 2 fractured faces as determined by ATM 305.

The percentage of wear shall not be greater than 50% when tested according to AASHTO T 96. The sodium sulfate soundness loss shall not exceed 9%, after 5 cycles, when tested according to AASHTO T 104. Aggregates shall have a minimum degradation value of 45 when tested according to ATM 313.

The fraction passing the No. 40 sieve shall have a liquid limit no greater than 25 and a plasticity index of not more than 6 when tested according ATM 204 and ATM 205.

- a. **Sampling and Testing.** The Engineer will sample aggregates for quality testing before the start of production. The Engineer, at no expense to the Contractor, will make all tests necessary to determine whether aggregate quality is in compliance with the specifications.

The Engineer will sample aggregates for acceptance according to ATM 301, and test aggregates for acceptance according to ATM 304.

- b. **Gradation Requirements.** The gradation of the final mixture shall fall within the range indicated in Table 1, when tested according to ATM 304. The final gradation shall be continuously well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on an adjacent sieve or vice versa.

TABLE 1. REQUIREMENTS FOR GRADATION OF AGGREGATE

Sieve Designation (Square Openings)	Percentage by weight passing sieves	
	C-1	D-1
1-1/2 in	100	--
1.00 in	70-100	100
3/4 in	60-90	70-100
3/8 in	45-75	50-80
No.4	30-60	35-65
No. 8	22-52	20-50
No. 50	8-30	8-30
No. 200	0-6	0-6

Note: Unless otherwise specified, Gradation C-1 shall be used.

CONSTRUCTION METHODS

209-3.1 PREPARING UNDERLYING COURSE. Placing and spreading operations shall not commence until the underlying course has been accepted, in writing, by the Engineer. Any ruts or soft areas shall be corrected and compacted to the required density before placing the base course. Crushed aggregate base course shall not be placed on frozen material.

209-3.2 MIXING. The aggregate shall be uniformly blended and, when at a satisfactory moisture content per paragraph 209-3.4, the approved material may be transported directly to the spreading equipment. The plant shall blend and mix the materials to meet the Specifications.

209-3.3 PLACING. The crushed aggregate base material shall be placed on the approved subgrade in uniform, equal-depth layers, each not exceeding 6 inches of compacted depth.

The previously constructed layer shall be cleaned of loose and foreign material prior to placing the next layer. The surface of the compacted material shall be kept moist until covered with the next layer.

209-3.4 COMPACTION. Immediately upon completion of the spreading operations, the aggregate shall be thoroughly compacted to the required density. \pm 2 percentage points of the optimum moisture content.

209-3.5 ACCEPTANCE SAMPLING AND TESTING FOR DENSITY. Base course will be accepted for density when the field density is not less than 98% of the maximum density, as determined according to ATM 207 or ATM 212, or ATM 309. The control strip for ATM 309 shall be compacted by a vibratory compactor with a minimum operating weight of 22,000 pounds.. The in-place field density and moisture content will be determined according to ATM 213. If the specified density is not attained, the material shall be reworked and/or recompacted until the specified density is reached.

209-3.6 FINISHING. The surface of the aggregate base course shall be finished by blading or with automated equipment specifically designed for this purpose.

In no case shall thin layers of material be added to the top of base course to meet grade. If the compacted elevation of the top layer is 0.05 foot or more below grade, it shall be scarified to a depth of at least 3 inches, new material added, and the layer shall be blended and compacted to bring it to grade. If the finished surface is above plan grade, it shall be cut back to grade and recompacted.

209-3.7 SURFACE TEST. After the course has been completely compacted, the surface will be tested by the Engineer for smoothness and accuracy of grade and crown. The finished surface shall not vary more than 3/8 inch from a 12-foot straightedge when applied to the surface parallel with, and at right angles to, the centerline. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be corrected to within the specified tolerances.

209-3.8 THICKNESS CONTROL. The thickness of the finished base course will be determined by the Engineer by taking before and after elevation measurements, or by depth tests, at random locations. The completed thickness of the base course shall be within 1/2 inch of the design thickness. Where the thickness is deficient by more than 1/2 inch, it shall be corrected to within the specified tolerances.

209-3.9 MAINTENANCE. The base course shall be maintained in a condition that will meet all specification requirements until the work is accepted. Equipment used in the construction of an adjoining section may be routed over completed portions of the base course, provided no damage results and provided that the equipment is routed over the full width of the base course to avoid rutting or uneven compaction.

METHOD OF MEASUREMENT

209-4.1 Crushed Aggregate Base Course will be measured by the cubic yard of material in place, graded and compacted, as determined by the average end area method, based upon final design template neat

lines in accordance with the contract documents and according to SECTION 00 7000 GENERAL CONDITIONS OF THE CONTRACT, Article 9 PAYMENTS AND COMPLETION.

Water needed for compaction and added to the base material on the grade will be considered incidental.

BASIS OF PAYMENT

209-5.1 Crushed Aggregate Base Course will be paid for at the contract price, per unit of measurement, accepted in place.

Payment will be made under:

Item P-209b Crushed Aggregate Base Course – Cubic Yard

TESTING REQUIREMENTS

ATM 212	Determining the Standard Density of Coarse Granular Materials Using the Vibratory Compactor
ATM 313	Degradation Value of Aggregates
AASHTO T 96	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
AASHTO T 104	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
ATM 301	Sampling Aggregates
ATM 304	Sieve Analysis of Aggregates & Soils
ATM 204	Liquid Limit of Soils
ATM 205 ATM 207	Plastic Limit and Plasticity Index of Soils Moisture-Density Relationship of Soils
ATM 307	Sand Equivalent
ATM 213	In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods
ATM 305	Percentage of Fracture in Coarse Aggregate

ITEM P-403 HOT MIX ASPHALT (HMA) PAVEMENTS

DESCRIPTION

403-1.1 This item shall consist of a surface course composed of mineral aggregate and asphalt cement binder (asphalt binder) mixed in a central mixing plant and placed on a prepared course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

MATERIALS

403-2.1 Aggregate. Aggregates shall consist of crushed stone, crushed gravel crushed slag, screenings, natural sand and mineral filler, as required. The aggregates should be free of ferrous sulfides, such as pyrite, that would cause "rust" staining that can bleed through pavement markings. The portion retained on the No. 4 sieve is coarse aggregate. The portion passing the No. 4 sieve and retained on the No. 200 sieve is fine aggregate, and the portion passing the No. 200 sieve is mineral filler.

- a. Coarse aggregate.** Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the bituminous material and free from organic matter and other deleterious substances. The percentage of wear shall not be greater than 40 percent when tested in accordance with AASHTO T 96. The sodium sulfate soundness loss shall not exceed 12%, or the magnesium sulfate soundness loss shall not exceed 18%, after five cycles, when tested in accordance with AASHTO T 104. The aggregate shall have a minimum degradation value of 30 when tested according to ATM 313.

Aggregate shall contain at least 50 percent by weight of individual pieces having two or more fractured faces and 65 percent by weight having at least one fractured face. The area of each face shall be equal to at least 75 percent of the smallest midsectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces. Fractured faces shall be achieved by crushing.

The aggregate shall not contain more than a total of 8%, by weight, of flat particles, elongated particles, and flat and elongated particles, when tested in accordance with ATM 306 with a value of 5:1.

- b. Fine aggregate.** Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, or gravel that meets the requirements for wear and soundness specified for coarse aggregate. The aggregate particles shall be free from coatings of clay, silt, or other objectionable matter.

The fine aggregate, including any blended material for the fine aggregate, shall have a plasticity index of not more than six (6) and a liquid limit of not more than 25 when tested in accordance with ATM 204 and ATM 205.

The soundness loss shall not exceed 10% when sodium sulfate is used or 15% when magnesium sulfate is used, after five cycles, when tested per ASTM C88.

Natural (non-manufactured) sand may be used to obtain the gradation of the aggregate blend or to improve the workability of the mix. The amount of sand to be added will be adjusted to produce mixtures conforming to requirements of this specification. The fine aggregate shall not contain more than 10% natural sand by weight of total aggregates. If used, the natural sand shall meet the requirements of ASTM D1073 and shall have a plasticity index of not more than six (6) and a liquid limit of not more than 25 when tested in accordance with ATM 307.

The aggregate shall have sand equivalent values of 35 or greater when tested in accordance with ASTM D2419.

- c. **Sampling.** ATM 301 shall be used in sampling coarse and fine aggregate, and AASHTO T 127 shall be used in sampling mineral filler.

403-2.2 Mineral filler. If filler, in addition to that naturally present in the aggregate, is necessary, it shall meet the requirements of AASHTO M 17.

403-2.3 Asphalt cement binder. Asphalt cement binder shall conform to ASTM D6373 Performance Grade (PG) 58-28. A certificate of compliance from the manufacturer shall be included with the mix design submittal.

The supplier's certified test report with test data indicating grade certification for the asphalt binder shall be provided to the Engineer for each load at the time of delivery to the mix plant. A certified test report with test data indicating grade certification for the asphalt binder shall also be provided to the Engineer for any modification of the asphalt binder after delivery to the mix plant and before use in the HMA.

403-2.4 Preliminary material acceptance. Prior to delivery of materials to the job site, the Contractor shall submit certified test reports to the Engineer for the following materials:

a. Coarse aggregate:

- (1) Percent of wear
- (2) Soundness
- (3) Degradation
- (4) Percent fractured faces
- (5) Flat and elongated particles

b. Fine aggregate:

- (1) Liquid limit and Plasticity index
- (2) Soundness
- (3) Percent natural sand
- (4) Sand equivalent

c. Mineral filler.

d. Asphalt binder. Test results for asphalt binder shall include temperature/viscosity charts for mixing and compaction temperatures.

The certifications shall show the appropriate ASTM tests for each material, the test results, and a statement that the material meets the specification requirement.

The Engineer may request samples for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications. Samples shall be provided by the contractor at no additional cost to the Owner.

COMPOSITION

403-3.1 Composition of mixture. The HMA plant mix shall be composed of a mixture of well-graded aggregate, filler and anti-strip agent if required, and asphalt binder. The several aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

403-3.2 Job mix formula. No hot-mixed asphalt (HMA) for payment shall be produced until a JMF has been approved in writing by the Engineer. The asphalt mix design and JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 403-3.4. The HMA shall be designed using procedures contained in Asphalt Institute MS-2 Mix Design Manual, Latest Edition. ASTM D6926 shall be used for preparation of specimens using the manually held and operated hammer for the mix design procedure. ASTM D6927 shall be used for testing for Marshall stability and flow.

If material variability exceeds the standard deviations indicated, the JMF and subsequent production targets shall be based on a stability greater than shown in Table 1 and the flow shall be targeted close to the mid-range of the criteria in order to meet the acceptance requirements.

If the Tensile Strength Ratio (TSR) of the composite mixture, as determined by ATM 414, is less than 75, the aggregates shall be rejected or the asphalt treated with an approved anti-stripping agent. The amount of anti-stripping agent added to the asphalt shall be sufficient to produce a TSR of not less than 75. If an antistrip agent is required, it will be provided by the Contractor at no additional cost. The JMF shall be submitted in writing by the Contractor at least 15 days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates currently being produced.

The submitted JMF shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- a. Percent passing each sieve size for total combined gradation, individual gradation of all aggregate stockpiles and percent by weight of each stockpile used in the JMF.
- b. Percent of asphalt cement.
- c. Asphalt performance, grade, and type of modifier if used.
- d. Number of blows of hammer compaction per side of molded specimen.
- e. Mixing temperature.
- f. Compaction temperature.
- g. Temperature of mix when discharged from the mixer.
- h. Temperature-viscosity relationship of the asphalt cement.
- i. Plot of the combined gradation on the Federal Highway Administration (FHWA) 45 power gradation curve.
- j. Graphical plots of stability, flow, air voids, voids in the mineral aggregate, and unit weight verses asphalt content.
- k. Specific gravity and absorption of each aggregate.
- l. Percent natural sand.
- m. Percent fractured faces.
- n. Percent elongated particles.
- o. Tensile Strength Ratio (TSR).
- p. Antistrip agent (if required).
- q. Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted.

The Engineer has authority to review submitted JMDs and to reject JMDs that do not meet specifications. The Contractor shall submit samples to the Engineer, upon request, for JMD verification testing. The Contractor shall submit to the Engineer the results of verification testing of three (3) asphalt samples prepared at the optimum asphalt content. The average of the results of this testing shall indicate conformance with the JMF requirements specified in Tables 1 and 3.

When the project requires asphalt mixtures of differing aggregate gradations, a separate JMF and the results of JMF verification testing shall be submitted for each mix.

The JMF for each mixture shall be in effect until a modification is approved in writing by the Engineer. Should a change in sources of materials be made, a new JMF must be submitted within 15 days and approved by the Engineer in writing before the new material is used.

The Marshall Design Criteria applicable to the project shall be as specified in Table 1.

Table 1. Marshall Design Criteria

Test Property	Value
Number of blows	50
Stability, pounds minimum	1000
Flow, 0.01 inch	8-20
Air voids (percent)	3.5
Percent voids in mineral aggregate, minimum	16

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 3 when tested in accordance with ATM 304.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply, be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

Table 2. Aggregate - HMA Pavements

Sieve Size	Percentage by Weight Passing Sieve
1 inch (25 mm)	100
3/4 inch (19 mm)	100
1/2 inch (12 mm)	100
3/8 inch (9 mm)	79-99
No. 4 (4.75 mm)	58-78
No. 8 (2.36 mm)	39-59
No. 16 (1.18 mm)	26-46
No. 30 (0.60 mm)	19-35
No. 50 (0.30 mm)	12-24
No. 100 (0.15 mm)	7-17
No. 200 (0.075 mm)	3-6
Asphalt Percent:	
Stone or gravel	5.5-8.0

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

403-3.3 Job mix formula (JMF) laboratory. The Contractor's laboratory used to develop the JMF shall be accredited in accordance with ASTM D3666. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the JMF must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Engineer prior to start of construction.

CONSTRUCTION METHODS

403-4.1 Weather limitations. The HMA shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than 40°F. The temperature requirements may be waived by the Engineer, if requested; however, all other requirements including compaction shall be met.

403-4.2 HMA plant. Plants used for the preparation of HMA shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 with the following changes:

a. Requirements for all plants include:

1. **Truck scales.** The HMA shall be weighed on approved scales furnished by the Contractor, or on certified public scales at the Contractor's expense. Scales shall be inspected and sealed as often as the Engineer deems necessary to assure their accuracy. Scales shall conform to the requirements of the General Provisions, subsection 90-01.

In lieu of scales, and as approved by the Engineer, HMA weights may be determined by the use of an electronic weighing system equipped with an automatic printer that weighs the total HMA production and as often thereafter as requested by the Engineer.

2. **Testing facilities.** The Contractor shall ensure laboratory facilities are provided at the plant for the use of the Engineer. The lab shall have sufficient space and equipment so that both testing representatives (Engineer's and Contractor's) can operate efficiently. The lab shall meet the requirements of ASTM D3666 including all necessary equipment, materials, and current reference standards to comply with the specifications and masonry saw with diamond blade for trimming pavement cores and samples. The plant testing laboratory shall have a floor space area of not less than 200 square feet (18.5 sq m), with a ceiling height of not less than 7-1/2 feet (2 m). The laboratory shall be weather tight, sufficiently heated in cold weather, air-conditioned in hot weather to maintain temperatures for testing purposes of 70°F ±5°F (21°C ±2.3°C). The plant testing laboratory shall be located on the plant site to provide an unobstructed view, from one of its windows, of the trucks being loaded with the plant mix materials. In addition, the facility shall include the minimum:

- i. Adequate artificial lighting.
- ii. Electrical outlets sufficient in number and capacity for operating the required testing equipment and drying samples.
- iii. A minimum of two (2) Underwriter's Laboratories approved fire extinguishers of the appropriate types and class.
- iv. Work benches for testing.
- v. Desk with chairs and file cabinet.
- vi. Sanitary facilities convenient to testing laboratory.
- vii. Exhaust fan to outside air.
- viii. Sink with running water.

Failure to provide the specified facilities shall be sufficient cause for disapproving HMA plant operations.

Laboratory facilities shall be kept clean, and all equipment shall be maintained in proper working condition. The Engineer shall be permitted unrestricted access to inspect the Contractor's laboratory facility and witness quality control activities. The Engineer will advise the Contractor in writing of any noted deficiencies concerning the laboratory facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

3. **Inspection of plant.** The Engineer, or Engineer's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant: verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.
4. **Storage bins and surge bins.** The HMA stored in storage and surge bins shall meet the same requirements as HMA loaded directly into trucks and may be permitted under the following conditions:
 - i. Stored in non-insulated bins for a period of time not to exceed three (3) hours.
 - ii. Stored in insulated storage bins for a period of time not to exceed eight (8) hours.

If the Engineer determines that there is an excessive amount of heat loss, segregation or oxidation of the HMA due to temporary storage, no temporary storage will be allowed.

403-4.3 Hauling equipment. Trucks used for hauling HMA shall have tight, clean, and smooth metal beds. To prevent the HMA from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the Engineer. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

403-4.4 HMA pavers. HMA pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of HMA that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface.

The paver shall have a receiving hopper of sufficient capacity to permit a uniform spreading operation. The hopper shall be equipped with a distribution system to place the HMA uniformly in front of the screed without segregation. The screed shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture.

If, during construction, it is found that the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued and satisfactory equipment shall be provided by the Contractor.

403-4.4.1 Automatic grade control. The HMA paver shall be equipped with a control system capable of automatically maintaining the specified screed elevation. The control system shall be automatically actuated from either a reference line and/or through a system of mechanical sensors or sensor-directed mechanisms or devices that will maintain the paver screed at a predetermined transverse slope and at the proper elevation to obtain the required surface. The transverse slope controller shall be capable of maintaining the screed at the desired slope within $\pm 0.1\%$.

The controls shall be capable of working in conjunction with any of the following attachments:

- a. Ski-type device of not less than 30 feet (9 m) in length
- b. Taut stringline (wire) set to grade
- c. Short ski or shoe
- d. Laser control

403-4.5 Rollers. Rollers of the vibratory, steel wheel, and pneumatic-tired type shall be used. They shall be in good condition, capable of operating at slow speeds to avoid displacement of the HMA. The number, type, and weight of rollers shall be sufficient to compact the HMA to the required density while it is still in a workable condition.

All rollers shall be specifically designed and suitable for compacting hot mix bituminous concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used. Depressions in pavement surfaces caused by rollers shall be repaired by the Contractor at their own expense.

The use of equipment that causes crushing of the aggregate will not be permitted.

403-4.5.1 Density device. The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall also supply a qualified technician during all paving operations to calibrate the density gauge and obtain accurate density readings for all new HMA. These densities shall be supplied to the Engineer upon request at any time during construction. No separate payment will be made for supplying the density gauge and technician.

403-4.6 Preparation of asphalt binder. The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the bituminous material to the mixer at a uniform temperature. The temperature of the unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F (160°C) when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F (175°C) when added to the aggregate.

403-4.7 Preparation of mineral aggregate. The aggregate for the HMA shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F (175°C) when the asphalt binder is added. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

403-4.8 Preparation of HMA. The aggregates and the asphalt binder shall be weighed or metered and introduced into the mixer in the amount specified by the JMF.

The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the

weight of the mixture delivered per second by the mixer. The moisture content of all HMA upon discharge shall not exceed 0.5%.

403-4.9 Preparation of the underlying surface. Immediately before placing the HMA, the underlying course shall be cleaned of all dust and debris. A tack coat shall be applied in accordance with Section P-603 between paving lifts. Tack coat shall be subsidiary to HMA.

403-4.10 Laydown plan, transporting, placing, and finishing. Prior to the placement of the HMA, the Contractor shall prepare a laydown plan for approval by the Engineer. This is to minimize the number of cold joints in the pavement. The laydown plan shall include the sequence of paving laydown by stations, width of lanes, temporary ramp locations, and laydown temperature. The laydown plan shall also include estimated time of completion for each portion of the work (that is, milling, paving, rolling, cooling, etc.). Modifications to the laydown plan shall be approved by the Engineer.

The HMA shall be transported from the mixing plant to the site in vehicles conforming to the requirements of paragraph 403-4.3. Deliveries shall be scheduled so that placing and compacting of HMA is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to atmospheric temperature.

Edges of existing HMA pavement abutting the new work shall be saw cut and carefully removed as shown on the drawings and coated with asphalt tack coat before new material is placed against it.

Upon arrival, the mixture shall be placed to the full width by a bituminous paver. It shall be struck off in a uniform layer of such depth that, when the work is completed, it shall have the required thickness and conform to the grade and contour indicated. The speed of the paver shall be regulated to eliminate pulling and tearing of the HMA mat. Unless otherwise permitted, placement of the HMA shall begin along the centerline of a crowned section or on the high side of areas with a one-way slope. The HMA shall be placed in consecutive adjacent strips having a minimum width of 10 feet except where edge lanes require less width to complete the area. Additional screed sections shall not be attached to widen paver to meet the minimum lane width requirements specified above unless additional auger sections are added to match. The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least one foot (30 cm); however, the joint in the surface top course shall be at the centerline of crowned pavements.

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the HMA may be spread and luted by hand tools.

Areas of segregation in the course, as determined by the Engineer, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of 2 inches deep. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet long.

403-4.11 Compaction of HMA. After placing, the HMA shall be thoroughly and uniformly compacted by power rollers. The surface shall be compacted as soon as possible when the mixture has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any displacement occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected at once.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the mixture to the roller, the wheels shall be equipped with a scraper and kept properly moistened using a water soluble asphalt release agent approved by the Engineer.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power driven tampers. Tampers shall weigh not less than 275 pounds (125 kg), have a tamping plate width not less than 15 inches (38 cm), be rated at not less than 4,200 vibrations per minute, and be suitably equipped with a standard tamping plate wetting device.

Any HMA that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

403-4.12 Joints. The formation of all joints shall be made in such a manner as to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade. The roller shall not pass over the unprotected end of the freshly laid HMA except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh HMA against the joint.

All longitudinal joints that have become cold (less than 160 degrees F) or damaged shall be cut back 4 inches maximum with a cutter mounted on the outside of a power roller as approved by the engineer. After being cut back, the joint will be brushed with a power broom as directed by the engineer to remove all loose asphalt concrete.

To ensure a continuous bond between the longitudinal pavement joints in the top lift, a tack coat of Crafcoc Pavement Joint Adhesive No. 34524 or Deery Cold Joint Adhesive, or approved equal, shall be applied to the joint prior to the laydown of the asphalt concrete. All longitudinal joints in the final lift shall be formed in such a manner that the joint meets density requirements of this specification. Joints that are irregular, damaged, uncompacted or otherwise defective, or which have been left exposed and whose surface temperature has cooled to less than 160 degrees F shall be cut back 4 inches maximum to expose a clean, sound surface. All contact surfaces shall be cleaned and dry and given an application of joint adhesive prior to placing any fresh mixture against the joint. When forming a longitudinal joint in the final lift, apply a 1/8 inch thick band joint adhesive to the full height of the joint uniform vertical surface for the full depth of the course before to placing any fresh hot mix asphalt against the joint. Joint edge preparation, and joint adhesive application temperature, thickness, and method shall be per the manufacturer's recommendations.

Joint sealant shall be applied in a 12-inch wide strip centered over joints in the final lift layer of hot mix asphalt while the asphalt is still clean, free of moisture, and before striping, when required according to Subsection 403-5.2.f.(2). Joint sealant shall be applied over joints in the final lift formed by two panels of hot mix asphalt composed of different type or class of mix; or of new against existing hot mix asphalt pavement. Joint surface preparation, joint sealant application temperature, thickness, and method shall be per the manufacturer's recommendations with a 1 inch max overlap on the bottom surface.

All costs associated with joint preparation, applying joint sealant, and applying joint adhesive are subsidiary to the hot mix asphalt pay item.

MATERIAL ACCEPTANCE

403-5.1 ACCEPTANCE SAMPLING AND TESTING. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the Engineer at no cost to the Contractor. Testing organizations performing these tests will meet the requirements of ASTM D3666.

Asphalt Lots. The quantity of each type of asphalt concrete mixture produced and placed will be divided into lots and the lots evaluated individually for acceptance. The Owner has the exclusive right and responsibility for determining the acceptability of all materials incorporated into the project. The results of the acceptance testing performed by the Engineer will be made available to the Contractor.

5,000 ton lot size. A lot will normally be 5,000 tons. The lot will be divided into 10 equal sublots of 500 tons, each randomly sampled and tested for asphalt cement content, density and gradation according to this subsection.

If the project has more than 1 lot and if less than 8 sublots have been sampled at the time a lot is terminated, the material in the shortened lot will be included as part of the prior lot and the price adjustment computed for the prior lot will include the samples from the shortened lot.

1,500 to 4,999 ton lot size. If the total project quantity is between 1,500 tons and 4,999 tons, the total project quantity will be considered one lot. The lot will be divided into sublots of 500 tons and randomly sampled for asphalt cement content, density and gradation according to this subsection except a determination for outliers will not be performed. The lot will be evaluated for price adjustment according to Subsection 403-5.2 except as noted.

Under 1,500 ton lot size. If the total project quantity is less than 1,500 tons, or for approaches, pathways, and temporary pavement, asphalt concrete pavement will be accepted for payment based on the Engineer's approval of a Job Mix Formula and the placement and compaction of the asphalt concrete pavement to the specified depth and finished surface requirements and tolerances, and material testing. The Engineer reserves the right to perform any testing required in order to determine acceptance.

Any area of finished surfacing that is segregated, fails to meet surface tolerance requirements, cools to below 170 °F prior to completing compaction, or is any other way defective shall be removed and replaced with new asphalt concrete pavement. Removal and replacement of defective pavement shall be at no additional cost to the Owner.

Joint lot size. The lot size for longitudinal joint density in the final lift of asphalt concrete pavement will be the total length of longitudinal joints constructed by a lot of material for the mat completing the joint.

a. Sampling.

- (1) **Cement Content.** Samples taken for the determination of asphalt cement content will be taken from behind the screed prior to initial compaction, at the auger, or from the windrow, according to ATM 402 and 403.

Two separate samples will be taken, one for acceptance testing and one held in reserve for retesting if applicable.

- (2) **Gradation.** Samples taken for the determination of aggregate gradation will be either of the following as directed by the Engineer, randomly according to the procedures contained in ATM 301. Two separate samples will be taken, one for acceptance testing and one held in

reserve for retesting if applicable. The samples will be taken from one of the following locations:

- (a) The same as specified for the determination of asphalt cement content.
- (b) From the combined aggregate cold feed conveyor via a diversion chute or from the stopped conveyor belt. On drum mix plants a diverter device for obtaining aggregate samples shall be located on the conveyor system delivering combined aggregates into the drum. The diverter device shall divert aggregate from the full width of the conveyor system and shall be maintained to provide a representative sample of aggregate incorporated in the mix. The plant shall be equipped with a safe and suitable location for obtaining aggregate samples from the diverter device.
- (c) Dry batched aggregates.

Density. The Contractor shall cut full depth core samples from each the finished HMA, within 24 hours of final rolling for density acceptance testing. Neatly cut one 6-inch-diameter core sample with a core drill at each location marked by the Engineer. Use a core extractor to prevent damage to the core. Backfill and compact voids left by coring with new HMA within 24 hours. Densities will not be measured at milled edge of existing pavement. Failure to cut core samples or backfill the holes left by sampling within the specified period will result in a deduction of \$100.00 per sample/hole per day. The accrued amount will be subtracted under Item P-403b, Hot Mix Asphalt Price Adjustment. Cores for mat density shall not be taken closer than 1 foot from a transverse or longitudinal joint.

Core samples for longitudinal joint density shall be centered on the intersection at the top surface of the two new hot mix asphalt panels, at the same station where the panel completing the joint is cored for mat density acceptance testing. Cores shall be taken by the Contractor in the presence of the Engineer. The Engineer will take immediate possession of the samples.

b. Testing.

- (1) **Cement Content.** Asphalt cement content will be determined by ATM 405 or ATM 406, by total weight of mix.
- (2) **Gradation.** Cold feed or dry batched aggregate gradations will be tested according to ATM 304 and evaluated for acceptance according to Subsection 403-5.2. Asphalt concrete mix and core sample gradations will be determined according to ATM 408 from extracted aggregate, or aggregate remaining after the ignition oven ATM 406 has burned off the asphalt cement.
- (3) **Density.** The Target Value for mat density shall be 95% of the theoretical MSG for all mixes as determined by ATM 409. For the first lot of asphalt concrete pavement, the MSG will be determined by the Job Mix Formula. For additional lots, the MSG will be determined from the randomly selected sample from the first subplot. For joint density lots, the MSG will be MSG of the adjacent mat lot completing the joint. The Target Value for longitudinal joint density in the final lift shall be 92% of the theoretical MSG as determined by ATM 409.

Core samples will be tested according to ATM 410, and evaluated for acceptance according to Subsection 403-5.2.

403-5.2 ACCEPTANCE CRITERIA.

- a. **General.** Acceptance will be based on the following characteristics of the hot mix asphalt and completed pavement as well as the implementation of the Contractor's Quality Control plan and test results:

- (1) Aggregate gradation
- (2) Asphalt content
- (3) Mat density
- (4) Joint density
- (5) Thickness
- (6) Smoothness
- (7) Grade

Aggregate gradation, asphalt content, mat density, and joint density will be evaluated for acceptance on a lot basis using the method of estimating percentage of material within specification limits (PWL). Acceptance using PWL considers the variability (standard deviation) of the material and the testing procedures, as well as the average (mean) value of the test results to calculate the percentage of material that is above the lower specification tolerance limit (L) or below the upper specification tolerance limit (U).

Thickness will be evaluated by the Engineer for compliance according to Subsection 403-5.2.f(4). Acceptance for smoothness will be based on the criteria contained in Subsection 403-5.2f(5). Acceptance for grade will be based on the criteria contained in Subsection 403-5.2f(6).

The Engineer may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of hot mix asphalt which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or improper mix temperature. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the Engineer, and, if it can be demonstrated in the laboratory, in the presence of the Engineer, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

- b. **Aggregate Gradation, Asphalt Content.** Evaluation for acceptance of each lot of plant-produced material for aggregate gradation and asphalt content will be based on PWL.
- c. **Mat Density.** Evaluation for acceptance of each lot of in-place pavement for mat density will be based on PWL.
- d. **Joint Density.** Evaluation for acceptance of each lot of in-place pavement for joint density will be based on PWL.
- e. **Percentage of Material Within Specification Limits (PWL).** The PWL will be determined according to procedures specified in Section 110 of SECTION GCP FAA GENERAL CONTRACT PROVISIONS. The sample average (X) is rounded to the nearest tenth for density and all sieves except the No. 200, and to the nearest hundredth for asphalt cement content and the No. 200 sieve. The sample standard deviation (Sn) is rounded to the nearest hundredth for density and all sieve sizes except the No. 200 sieve. The sample standard deviation (Sn) is rounded to the nearest .001 for asphalt content and the No. 200 sieve. The specification tolerance limits (L) and (U) are contained in Table 7.
- f. **Acceptance Criteria.**
- (1) **Mat Density, Aggregate Gradation, and Asphalt Content.** Acceptance and payment for the lot will be determined according to Subsection 403-8.1.
 - (2) **Longitudinal Joint Density.** Sections of longitudinal joint represented by cores with less than 91.0% density shall be surface sealed with Asphalt Systems GSB-88, or approved equal,

while the hot mix asphalt is still clean, free of moisture, and before striping. Sealing shall extend the entire longitudinal joint length between joint cores that meet the specification for density. For this type of application, GSB-78 will not be considered an “approved equal.” All costs associated with sealing the joints are subsidiary to the hot mix asphalt pay item. Longitudinal joint lots will be evaluated for payment according to Subsection 403-8.3.

Longitudinal joint sealing shall be per the sealant manufacturer’s recommendations. The sealant application shall be at least 12 inches wide and centered on the longitudinal joint.

- (3) **Thickness.** Thickness will be evaluated for compliance by the Engineer to the requirements shown on the Plans. Measurements of thickness will be made by the Engineer using the cores extracted from the mat for each subplot for density measurement.
 - (4) **Smoothness.** The finished surfaces of the pavement shall not vary more than 1/4 inch for the surface course. Each lot will be evaluated with a 12-foot straightedge. The lot size will be 2000 yd². Measurements will be made perpendicular and parallel to the centerline at distances not to exceed 50 feet. When more than 15% of all measurements within a lot exceed the specified tolerance, the Contractor shall remove the deficient area and replace with new material. Sufficient material shall be removed to allow at least 1 inch of asphalt concrete to be placed. Skin patching will not be permitted. High points may be ground off.
 - (5) **Grade.** The finished surface of the pavement shall not vary from the gradeline elevations and cross sections shown on the Plans by more than 0.05 foot. The finished grade of each lot will be determined by running levels at intervals of 50 feet or less longitudinally and transversely to determine the elevation of the completed pavement. The lot size will be 2000 yd². When more than 15% of all the measurements within a lot are outside the specified tolerance, the Contractor shall remove the deficient area and replace with new material. Sufficient material shall be removed to allow at least 1 inch of asphalt concrete to be placed. Skin patching for correcting low areas will not be permitted. High points may be ground off.
- g. Outliers.** All individual tests for asphalt content, aggregate gradation, and mat and joint density will be checked for outliers (test criterion) according to ATM SP-7, except as noted in Subsection 403-5.1. Outliers will be discarded, and the PWL will be determined using the remaining test values.

If any sieve size on a gradation test or the asphalt cement content is an outlier, then the gradation test results and the asphalt cement content results for that sample will not be included in the price adjustment. The density test result for that sample will be included in the price adjustment provided it is not an outlier also.

If the density test result is an outlier, the density test result will not be included in the price adjustment, however, the gradation and asphalt cement content results for that sample will be included provided neither is an outlier.

**TABLE 7. LOWER SPECIFICATION TOLERANCE LIMIT (L)
AND UPPER SPECIFICATION TOLERANCE LIMIT (U)**

Measured Characteristics	L	U
3/4 in.	TV -6.0	TV +6.0
1/2 in.	TV -6.0	TV +6.0
3/8 in.	TV -6.0	TV +6.0
No. 4	TV -6.0	TV +6.0
No. 8	TV -6.0	TV +6.0
No. 16	TV -5.0	TV +5.0

No. 30	TV -4.0	TV +4.0
No. 50	TV -4.0	TV +4.0
No. 100	TV-3.0	TV +3.0
No. 200	TV-2.0	TV +2.0
Asphalt %	TV-0.4	TV+0.4
Mat Density *	92%	98%
Joint Density	91%	98%

TV (Target Value) = Job Mix Formula value for gradation and asphalt cement content

* Mat Density

403-5.3 RETESTS.

- a. **General.** Retesting of a sample of pavement, which is outside the limits specified in Table 7, will be allowed if requested by the Contractor, in writing, within 2 days of receipt of the final test of the lot. Only one retest per sample will be permitted. The Engineer will select the sample location for the retest. The original test result will be discarded and the retest result will be used in the price adjustment calculation regardless of whether the retest result gives a higher or lower pay factor.

(1) A redefined PWL will be calculated for the lot.

(2) The cost for resampling shall be borne by the Contractor.

- b. **Payment for Resampled Lots.** The redefined PWL for a lot will be used to calculate the payment for that lot according to Table 8.

403-5.4 LEVELING COURSE. Any course used for truing and leveling shall meet the requirements of Subsection 403-3.2 and 5.2b, but will not be subject to the density requirements of Subsection 403-5.2c and d. The leveling course shall be compacted with the same effort used to achieve density of the test section. The truing and leveling course shall not exceed a nominal thickness of 1-1/2 inches.

CONTRACTOR QUALITY CONTROL

403-6.1 GENERAL. The Contractor shall develop a Quality Control Program according to Section 100 of the General Provisions. The program shall address all elements which affect the quality of the pavement including, but not limited to:

a. Mix Design	f. Mixing and Transportation
b. Aggregate Grading	g. Placing and Finishing
c. Quality of Materials	h. Joints
d. Stockpile Management	i. Compaction
e. Proportioning	j. Surface smoothness

403-6.2 TESTING LABORATORY. The Contractor shall provide a fully equipped asphalt laboratory located at the plant or job site.

The effective working area of the laboratory shall be a minimum of 150 ft² with a ceiling height of not less than 7.5 feet. Lighting shall be adequate to illuminate all working areas. It shall be equipped with heating units to maintain a temperature of 70 °F ± 5 °F.

Laboratory facilities shall be kept clean and all equipment shall be maintained in proper working condition. The Engineer shall be permitted unrestricted access to inspect the Contractor's laboratory facility and witness quality control activities. The Engineer will advise the Contractor in writing of any noted deficiencies concerning the laboratory facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting test results, the incorporation of the materials into the work will be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

403-6.3 QUALITY CONTROL TESTING. The Contractor shall perform all quality control tests necessary to control the production and construction processes applicable to these Specifications and as set forth in the Quality Control Program. The testing program shall include, but not necessarily limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A Quality Control Testing Plan shall be developed as part of the Quality Control Program.

- a. **Asphalt Content.** A minimum of 2 asphalt cement content tests shall be performed per lot according to Subsection 403-5.1b(1).
- b. **Gradation.** Aggregate gradations shall be determined a minimum of twice per lot from mechanical analysis of aggregate according to ATM 408 and ATM 304. When asphalt content is determined by the nuclear method, aggregate gradation shall be determined from hot bin samples on batch plants, or from the cold feed on drum mix or continuous mix plants, and tested according to ATM 304 using actual batch weights to determine the combined aggregate gradation of the mixture.
- c. **Moisture Content of Aggregate.** The moisture content of aggregate used for production shall be determined a minimum of once per lot according to ATM 202.
- d. **Moisture Content of Mixture.** The moisture content of the mixture shall be determined per lot according to ATM 407.
- e. **Temperatures.** Temperatures shall be checked, at least 4 times per lot, at necessary locations to determine the temperatures of the dryer, the bitumen in the storage tank, the mixture at the plant, and the mixture at the job site.
- f. **In-Place Density Monitoring.** The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density according to ATM 411.
- g. **Additional Testing.** Any additional testing that the Contractor deems necessary to control the process may be performed at the Contractor's option.
- h. **Monitoring.** The Engineer reserves the right to monitor any or all of the above testing.

403-6.4 SAMPLING. When directed by the Engineer, the Contractor shall sample and test any material which appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be according to standard procedures specified.

403-6.5 CONTROL CHARTS. The Contractor shall maintain linear control charts both for individual measurements and range (i.e., difference between highest and lowest measurements) for aggregate gradation and asphalt content.

Control charts shall be posted in a location satisfactory to the Engineer and shall be kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number,

each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the Engineer may suspend production or acceptance of the material.

- a. **Individual Measurements.** Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation and asphalt content. The control charts shall use the JMF Target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

CONTROL CHART LIMITS FOR INDIVIDUAL MEASUREMENTS

Sieve	Action Limit	Suspension Limit
3/4 in.	0%	0%
1/2 in.	+/-6%	+/-9%
3/8 in.	+/-6%	+/-9%
No. 4	+/-6%	+/-9%
No. 16	+/-5%	+/-7.5%
No. 50	+/-3%	+/-4.5%
No. 200	+/-2%	+/-3%
Asphalt Cement Content	+/-0.45%	+/-0.70%

- b. **Range.** Control charts for range shall be established to control process variability for the test parameters and Suspension Limits listed below. The range shall be computed for each lot as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of n = 2. Should the Contractor elect to perform more than 2 tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for n = 3 and by 1.27 for n = 4.

**CONTROL CHART LIMITS BASED ON RANGE
(Based on n = 4)**

Sieve	Suspension Limit
1/2 in.	14%
3/8 in.	14%
No. 4	14%
No. 16	11%
No. 50	8%
No. 200	4.5%
Asphalt Cement Content	1%

- c. **Corrective Action.** The Quality Control Plan shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain sets of rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

- (1) One point falls outside the Suspension Limit line for individual measurements or range; or
- (2) Two points in a row fall outside the Action Limit line for individual measurements.

METHOD OF MEASUREMENT

403-7.1 MEASUREMENT. Hot mix asphalt will be measured by the number of tons used in the accepted work, based on recorded truck scale weights. No deduction will be made for the weight of asphalt cement in the mixture.

Asphalt cement will be measured by the number of tons of asphalt cement used in the accepted pavement determined as follows:

The method of measurement to be used will be based on one of the following procedures. The Engineer will select in writing the procedure to be used.

- a. Supplier's invoices minus waste, diversion and excess left over. This method may be used on projects where deliveries are made in sealed tankers and the plant is producing material for one project only. Method b. will be used to compute left over. Waste and diversion will be computed in a manner to be determined by the Engineer.
- b. Volume measure (tank stickings) of actual daily uses. It is the Contractor's responsibility to notify the Engineer whenever material is to be added to the calibrated volume measure or whenever material from the volume measure is to be used for work other than that specified in this contract.
- c. Percent of asphalt cement for each subplot as determined by ATM 405 or ATM 406 multiplied by the weight represented by that subplot.

Method c. will be used for determining asphalt cement quantity unless otherwise directed in writing by the engineer. Whichever method is used must be used for the duration of the project. Another method may be used and computed as a check, but only one method will be used for payment computation.

BASIS OF PAYMENT

403-8.1 PAYMENT. Payment for an accepted lot of hot mix asphalt will be made at the contract unit price per square yard for 4-inch thick hot mix asphalt, complete and in place. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

403-8.2 LONGITUDINAL JOINT. The cost for all joints is subsidiary to hot mix asphalt, no payment will be made.

BASIS OF PAYMENT

Payment will be made under:

Item P-403a	Hot Mix Asphalt, 4-inch thick – Square Yard
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TESTING REQUIREMENTS

ATM 301	Sampling Aggregates
ATM 304	Sieve Analysis of Aggregate and Soils
ATM 408	Mechanical Analysis of Extracted Aggregate
ATM 401	Sampling Bituminous Materials
ATM 307	Percentage of Fracture in Coarse Aggregate

ATM 204	Liquid Limit of Soils
ATM 205	Plastic Limit and Plasticity Index of Soils
ATM 410	Bulk Specific Gravity and Percent Compaction of Bituminous Mixes
ATM 402	Sampling Bituminous Mixes
ATM 307	Sand Equivalent
ATM 409	Maximum Specific Gravity of Bituminous Mixes
ATM 202	Moisture Content of Aggregate and Soils
ATM 406	Asphalt Binder Content of Bituminous Mixes by Ignition Method
ATM 407	Moisture Content of Hot-Mix Asphalt (HMA) by Oven Method
ATM 411	In-Place Density of Bituminous Mixes using the Nuclear Moisture-Density Gauge.
ATM 305	Determining the Percentage of Fracture in Coarse Aggregate.
ATM 306	Flat and Elongated
ATM 313	Degradation Value of Aggregate
ATM 405	Asphalt Cement Content of Asphalt Concrete Mixtures by the Nuclear Method
ATM 414	Anti-Strip Requirements of Hot Mix Asphalt
ATM 417	Hot Mix Asphalt Design by the Marshall Method
ATM SP-7	Determination of Outlier Test Results
AASHTO T 53	Softening Point of Bitumen (Ring-and-Ball Apparatus)
AASHTO T 96	Resistance to Degradation of Small-size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
AASHTO T 104	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
AASHTO T 127	Sampling and Amount of Testing of Hydraulic Cement
AASHTO M 156	Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures
AASHTO T 195	Determining Degree of Particle Coating of Bituminous-Aggregate Mixtures
AASHTO M 320	Performance-Graded Asphalt Binder
ASTM D3244	Utilization of Test Data to Determine Conformance with Specifications
ASTM D5801	Test Method for Toughness and Tenacity of Bituminous Materials
The Asphalt Institute	Mix Design Methods for Asphalt Concrete Manual No. 2 (MS-2)

The Asphalt Institute Hot-Mix Recycling Manual No. 20 (MS-20)

MATERIAL REQUIREMENTS

AASHTO R 14 Classifying Hot-Mix Recycling Agents

AASHTO M 17 Mineral Filler for Bituminous Paving Mixtures

ITEM P-603 TACK COAT

DESCRIPTION

603-1.1 This item shall consist of preparing and treating an asphalt or concrete surface with liquid asphalt material according to these Specifications and in reasonably close conformity to the lines shown on the Plans.

MATERIALS

603-2.1 MATERIALS. Tack coat material shall be either cutback asphalt, emulsified asphalt, or tar and shall conform to the requirements of Table 1. The type, grade, controlling specification, and application temperature of tack coat to be used shall be specified by the Engineer.

TABLE 1. MATERIAL

Type and Grade	Specification	Application Temperature °F	Application Rate gal/yd ²
Emulsified Asphalt			
SS-1, SS-1h	AASHTO M 140	75-130	0.05 to 0.16
CSS-1, CSS-1h	AASHTO M 208	75-130	0.05 to 0.16
STE-1	\1\	68-140	0.08 to 0.10
Cutback Asphalt			
RC-70	ASTM D 2028	120-160	0.05 to 0.16
Tar			
RTCB 5, RTCB 6	AASHTO M 52	60-120	0.05 to 0.16

\1\ STE-1 shall meet the following specifications: Viscosity, Sabolt Furol at 77 °F of 30 max., when tested under AASHTO T 59. Particle charge test of Positive when tested under AASHTO T 59 (If particle charge test is inconclusive, material having a max. pH value of 6.7 will be acceptable). Storage Stability, 1 day 1% max when tested under AASHTO T 59. Demulsibility, 35 mil 0.8% Dioctyl Sodium Sulfosuccinate Solution 25 minimum when tested under AASHTO T 59. Sieve test maximum of 0.10% when tested under AASHTO T 59. Oil distillate, by volume of emulsion, of 5% maximum when tested under AASHTO T 59. Residue of 45% minimum when tested under AASHTO T 59. Penetration at 77 °F, 100 gm, 5 sec. of 100 minimum, 200 maximum when tested under ASTM D 5. Ductility at 77 °F of 40 cm minimum when tested under ASTM D 113. Solubility in trichloroethylene of 97.5% minimum

CONSTRUCTION METHODS

603-3.1 WEATHER LIMITATIONS. The tack coat shall be applied only when the existing surface is dry and the surface temperature is above 50 °F. The temperature requirements may be waived, but only when so directed by the Engineer.

603-3.2 EQUIPMENT. The Contractor shall provide equipment for heating and applying the tack coat.

The distributor shall be designed, equipped, maintained, and operated so that tack coat at even heat may be applied uniformly on variable widths of surface at the specified rate. The allowable variation from the specified rate shall not exceed 10%. Distributor equipment shall include a tachometer, pressure gages, volume-measuring devices or a calibrated tank, and a thermometer for measuring temperatures of tank

contents. The distributor shall be self-powered and shall be equipped with a power unit for the pump and full circulation spray bars adjustable laterally and vertically.

A power broom and/or blower shall be provided for any required cleaning of the surface to be treated.

603-3.3 APPLICATION OF TACK COAT. Immediately before applying the tack coat, the full width of surface to be treated shall be swept with a power broom and/or airblast to remove all loose dirt and other objectionable material.

Emulsified asphalt shall be applied a sufficient time in advance of the paver to ensure that all water has evaporated before any of the overlying mixture is placed on the tacked surface.

The tack coat material including vehicle or solvent shall be uniformly applied with an asphalt distributor at the rate specified in Table 1, depending on the condition of the existing surface. The type of material and application rate shall be approved by the Engineer prior to application.

Following the application, the surface shall be allowed to cure without being disturbed for such period of time as may be necessary to permit drying out and setting of the tack coat. This period shall be determined by the Engineer. The surface shall then be maintained by the Contractor until the next course has been placed. Suitable precautions shall be taken by the Contractor to protect the surface against damage during this interval.

603-3.4 CONTRACTOR'S RESPONSIBILITY. Samples of the tack coat material that the Contractor proposes to use, together with a statement as to its source and character, must be submitted and approved before use of such material begins. The Contractor shall require the manufacturer or producer of the tack coat to furnish material subject to this and all other pertinent requirements of the contract. Only satisfactory materials so demonstrated by certified tests, shall be acceptable.

The Contractor shall furnish the vendor's certified test reports for each carload, or equivalent, of tack coat shipped to the project. The report shall be delivered to the Engineer before permission is granted for use of the material. The furnishing of the vendor's certified test report for the material shall not be interpreted as a basis for final acceptance. All such test reports shall be subject to verification by testing samples of material received for use on the project.

603-3.5 FREIGHT AND WEIGH BILLS. Before the final estimate is allowed, the Contractor shall file with the Engineer receipted bills when railroad shipments are made, and certified weigh bills when materials are received in any other manner, of the tack coat actually used in the construction covered by the contract. The Contractor shall not remove tack coat from the tank car or storage tank until the initial outage and temperature measurements have been taken by the Engineer, nor shall the car or tank be released until the final outage has been taken by the Engineer. Copies of freight bills and weigh bills shall be furnished to the Engineer during the progress of the work.

METHOD OF MEASUREMENT

603-4.1 Tack coat shall be considered subsidiary to Hot Mix Asphalt and shall not be measured directly for payment.

ITEM P-610 STRUCTURAL PORTLAND CEMENT CONCRETE

DESCRIPTION

610-1.1 This item shall consist of plain or reinforced structural portland cement concrete, prepared and constructed according to these Specifications, at the locations and of the form and dimensions shown on the Plans. This specification shall be used for all structural and miscellaneous concrete including signage bases.

MATERIALS

610-2.1 GENERAL. Only approved materials, conforming to the requirements of these Specifications, shall be used in the work. They may be subjected to inspection and tests at any time during the progress of their preparation or use. The source of supply of each of the materials shall be approved by the Engineer before delivery or use is started. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed therein.

In no case shall the use of pit-run or naturally mixed aggregates be permitted. Naturally mixed aggregate shall be screened and washed, and all fine and coarse aggregates shall be stored separately and kept clean. The mixing of different kinds of aggregates from different sources in one storage pile or alternating batches of different aggregates will not be permitted.

610-2.2 COARSE AGGREGATE. The coarse aggregate shall meet the requirements of AASHTO M 80, Class A.

Coarse aggregate shall be well graded from coarse to fine, and shall meet AASHTO M 43, Number 57 or 67, when tested according to ATM 304.

610-2.3 FINE AGGREGATE. The fine aggregate shall meet the requirements of AASHTO M 6,.

The fine aggregate shall be well graded from fine to coarse, and shall meet the requirements of AASHTO M 6, Table 1, when tested according to ATM 304.

Blending will be permitted, if necessary, in order to meet the gradation requirements for fine aggregate. Fine aggregate deficient in the percentage of material passing the No. 50 sieve may be accepted, provided that such deficiency does not exceed 5% and is remedied by the addition of pozzolanic or cementitious materials other than portland cement, as specified in 610-2.6 on admixtures, in sufficient quantity to produce the required workability as approved by the Engineer.

610-2.4 CEMENT. Cement shall conform to the requirements of AASHTO M 85.

The Contractor shall furnish manufacturer's certified test reports for each carload, or equivalent, of cement shipped to the project. The report shall be delivered to the Engineer before permission to use the cement is granted. All such test reports shall be subject to verification by testing sample materials received for use on the project.

610-2.5 WATER. The water used in concrete shall be potable and free from sewage, oil, acid, strong alkalis, vegetable matter, and clay and loam, or other substances deleterious to concrete. If the water is of questionable quality, it shall be tested according to AASHTO T 26.

610-2.6 ADMIXTURES. The use of any material added to the concrete mix shall be indicated on the mix design approved by the Engineer. The Contractors shall submit the manufacturer's product data sheet

giving the procedure for admixture use, recommended dosage range, and demonstrating admixture compatibility. The Contractors shall submit the manufacturer's product data sheet giving the procedure for admixture use, recommended dosage, and demonstrating admixture compatibility.

Air-entraining admixtures shall meet the requirements of AASHTO M 154. Air-entraining admixtures shall be added at the mixer in the amount necessary to produce the specified air content.

Water-reducing, set-controlling admixtures shall meet the requirements of AASHTO M 194, Type A water-reducing, or Type D water-reducing and retarding. Water-reducing admixtures shall be added at the mixer separately from air-entraining admixtures according to the manufacturer's printed instructions.

Water proofing admixture shall be Xypex Admix C-1000 by Xypex Chemical Corporation or approved equal. Admixture dosage shall adhere to the maximum manufacturers recommended dosage by weight of cement content.

610-2.7 PREMOLDED JOINT MATERIAL. Premolded joint material for expansion joints shall meet the requirements of AASHTO M 213.

610-2.8 JOINT FILLER. The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.

610-2.9 STEEL REINFORCEMENT. Reinforcing shall consist of Deformed and Plain Billet-Steel Bars conforming to the requirements of AASHTO M 31, Welded Steel Wire Fabric conforming to the requirements of AASHTO M 55, Welded Deformed Steel Fabric conforming to the requirements of AASHTO M 221, or Bar Mats conforming to the requirements of AASHTO M 54, as shown on the Plans.

610-2.10 COVER MATERIALS FOR CURING. Curing materials shall conform to one of the following specifications:

- | | |
|---|---|
| a. Burlap Cloth made from Jute or Kenaf | AASHTO M 182 |
| b. Sheet Materials for Curing Concrete | ASTM C171 |
| c. Liquid Membrane – Forming | AASHTO M 148, Type I or II |
| d. Compounds for Curing Concrete | AASHTO M 148, Type I,
except do not use compounds using linseed oil. |

CONSTRUCTION METHODS

610-3.1 GENERAL. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified herein. All machinery and equipment owned or controlled by the Contractor, which they propose to use on the work, shall be of sufficient size to meet the requirements of the work, and shall be such as to produce satisfactory work; all work shall be subject to the inspection and approval of the Engineer.

610-3.2 CONCRETE COMPOSITION. The concrete shall develop a minimum compressive strength of 5000 psi in 28 days as determined by test cylinders made according to ATM 506 and tested according to AASHTO T 22. The concrete shall contain not less than 564 pounds of cement per cubic yard. The concrete shall contain 6% of entrained air, plus or minus 1%, as determined by ATM 505 and shall have a slump of not more than 4 inches as determined by ATM 503.

610-3.3 ACCEPTANCE SAMPLING AND TESTING. Concrete for each structure will be accepted on the basis of the compressive strength and air content specified in Subsection 610-3.2. The concrete will be sampled by the Engineer according to ATM 501. Compressive strength specimens will be made according to ATM 506 and tested according to AASHTO T 22. Contractor shall provide access and concrete material as required and directed by the Engineer at no additional cost.

610-3.4 PROPORTIONING AND MEASURING DEVICES. When package cement is used, the quantity for each batch shall be equal to one or more whole sacks of cement. The aggregates shall be measured separately by weight. If aggregates are delivered to the mixer in batch trucks, the exact amount for each mixer charge shall be contained in each batch compartment. Weighing boxes or hoppers shall be approved by the Engineer and shall provide means of regulating the flow of aggregates into the batch box so that the required and exact weight of aggregates can be readily obtained.

610-3.5 CONSISTENCY. The consistency of the concrete shall be checked by the slump test specified in ATM 503.

610-3.6 MIXING. Concrete may be mixed at the construction site, at a central point, or in truck mixers. The concrete shall be mixed and delivered according to the requirements of AASHTO M 157.

610-3.7 MIXING CONDITIONS. The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40 °F without permission of the Engineer. If permission is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50 °F nor more than 100 °F. The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at their expense.

Retempering of concrete by adding water or any other material shall not be permitted.

The delivery of concrete to the job shall be in such a manner that batches of concrete will be deposited at uninterrupted intervals.

610-3.8 FORMS. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the Engineer. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as designed on the Plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The Contractor shall bear responsibility for their adequacy. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes.

The internal ties shall be arranged so that, when the forms are removed, no metal will show in the concrete surface or discolor the surface when exposed to weathering. All forms shall be wetted with water or with a nonstaining mineral oil which shall be applied shortly before the concrete is placed. Forms shall be constructed so that they can be removed without injuring the concrete or concrete surface. The forms shall not be removed before the expiration of at least 30 hours from vertical faces, walls, slender columns, and similar structures; forms supported by falsework under slabs, beams, girders, arches, and similar construction shall not be removed until tests indicate that at least 80% of the design strength of the concrete has developed.

610-3.9 PLACING REINFORCEMENT. All reinforcement shall be accurately placed, as shown on the Plans, and shall be firmly held in position during concreting. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

Reinforcing bars shall be bent cold and shall conform accurately to the shape and dimensions shown on the diagram. In no case shall the radius of any bend be less than 4 times the diameter of the bar.

Place reinforcement as indicated on the Plans or as hereinafter specified. Rigidly block and wire in place, using metal or plastic supports or concrete blocks and securely tie at each intersection with annealed iron wire of at least 1/8 inch.

Do not splice bars at points not indicated on the Plans except with the consent of the Engineer. Such splices shall be at the points of minimum tensile stress and the lap shall be not less than 36 bar diameters.

Verify the quantity, size, and shape of the reinforcement against the structure drawings and make necessary corrections to the bar lists and bending schedules before ordering. Errors in the bar lists and/or bending schedules shall not be cause for adjustment of the contract prices.
If reinforcing bars are to be welded, follow AWS D12.1.

610-3.10 EMBEDDED ITEMS. Before placing concrete, any items that are to be embedded shall be firmly and securely fastened in place as indicated. All such items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The embedding of wood shall be avoided. The concrete shall be spaded and consolidated around and against embedded items.

610-3.11 PLACING CONCRETE. All concrete shall be placed during daylight, unless otherwise approved. The concrete shall not be placed until the depth and character of foundation, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved. Concrete shall be placed as soon as practical after mixing and in no case later than 1 hour after water has been added to the mix. The method and manner of placing shall be such to avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. Dropping the concrete a distance of more than 5 feet, or depositing a large quantity at one point, will not be permitted. Concrete shall be placed upon clean, damp surfaces, free from running water, or upon properly consolidated soil.

610-3.12 CONSOLIDATION OF CONCRETE. Consolidate fresh concrete within 15 minutes of its placement. Consolidate concrete using mechanical vibrators to make an impervious, dense, homogeneous mass free of voids and rock pockets. Vibrate in a uniform pattern spaced less than 1.5 times the radius of visible effectiveness. Effectively vibrate the full depth of each layer.

Do not vibrate concrete that has initially set. Do not hold vibrators against reinforcing steel or use vibrators to flow or spread the concrete into place. Do not allow the concrete to segregate, form pools of mortar, or form laitance on the surface.

610-3.13 CONSTRUCTION JOINTS. When the placing of concrete is suspended, necessary provisions shall be made for joining future work before the placed concrete takes its initial set. For the proper bonding of old and new concrete, such provisions shall be made for grooves, steps, keys, dovetails, reinforcing bars or other devices as may be prescribed. The work shall be arranged so that a section begun on any day shall be finished during daylight of the same day. Before depositing new concrete on or against concrete which has hardened, the surface of the hardened concrete shall be cleaned by a heavy steel broom, roughened slightly, wetted, and covered with a neat coating of cement paste or grout.

610-3.14 EXPANSION JOINTS. Expansion joints shall be constructed at such points and of such dimensions as may be indicated on the drawings. The premolded filler shall be cut to the same shape as that of the surfaces being joined. The filler 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.

610-3.15 DEFECTIVE WORK. Any defective work disclosed after the forms have been removed shall be immediately removed and replaced. If any dimensions are deficient, or if the surface of the concrete is bulged, uneven, or shows honeycomb, which in the opinion of the Engineer cannot be repaired satisfactorily, the entire section shall be removed and replaced at the expense of the Contractor.

610-3.16 SURFACE FINISH. All exposed concrete surfaces shall be true, smooth, free from open or rough spaces, depressions, or projections. The concrete in horizontal plane surfaces shall be brought flush with the finished top surface at the proper elevation and shall be struck-off with a straightedge and floated. Mortar finishing shall not be permitted, nor shall dry cement or sand-cement mortar be spread over the concrete during the finishing of horizontal plane surfaces.

When directed, the surface finish of exposed concrete shall be a rubbed finish. If 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 are removed. If the concrete has hardened before being rubbed, a carborundum stone shall be used to finish the surface. When approved, the finishing can be done with a rubbing machine.

610-3.17 CURING AND PROTECTION. All concrete shall be properly cured and protected by the Contractor. The work shall be protected from the elements, flowing water, and from defacement of any nature during the building operations. The concrete shall be cured as soon as it has sufficiently hardened by covering with an approved material. Water-absorptive coverings shall be thoroughly saturated when placed and kept saturated for a period of at least 3 days for Type III Portland Cement and at least 7 days for Type I or Type II Portland Cement Concrete. All curing mats or blankets shall be sufficiently weighted or tied down to keep the concrete surface covered and to prevent the surface from being exposed to currents of air. Where wooden forms are used, they shall be kept wet at all times until removed to prevent the opening of joints and drying out of the concrete. Traffic shall not be allowed on concrete surfaces for 7 days after the concrete has been placed.

610-3.18 DRAINS OR DUCTS. Drainage pipes, conduits, and ducts that are to be encased in concrete shall be installed by the Contractor before the concrete is placed. The pipe shall be held rigidly so that it will not be displaced or moved during the placing of the concrete.

610-3.19 COLD WEATHER PROTECTION. When concrete is placed at temperatures below 40 °F, the Contractor shall provide satisfactory methods and means to protect the mix from injury by freezing. The aggregates, or water, or both, shall be heated in order to place the concrete at temperatures between 50 and 100 °F.

610-3.20 HOT WEATHER CONCRETE PROTECTION. When concrete is placed at temperatures above 90°F, the Contractor shall provide satisfactory mean and methods to protect the mix. Steel forms and reinforcement shall be cooled prior to concrete placement when steel temperatures are greater than 120°F. Conveying and placing equipment shall be cooled if necessary to maintain proper concrete-placing temperature.

610-3.21 FILLING JOINTS. All joints which require filling shall be thoroughly cleaned, and any excess mortar or concrete shall be cut out with proper tools. Joint filling shall not be started until after final curing and shall be done only when the concrete is completely dry. The cleaning and filling shall be carefully done with proper equipment and in a manner to obtain a neat looking joint free from excess filler.

610-3.22 EXCAVATION AND DISPOSAL. Excavate to the minimum depth necessary for the removal of existing structural portland cement concrete. Excavated material becomes the property of the Contractor. Remove excavated material to an approved disposal site off of airport property in accordance with applicable Federal and State regulations.

METHOD OF MEASUREMENT

610-4.1 Flapper Gate Lift System Support Wall will be measured as a Lump Sum Pay Unit, Complete, in place including all rebar, forming and finishing as shown in the Plans, as directed by the Engineer all in accordance with the Contract Documents.

610-4.2 All other work, materials, and equipment required to complete the work will be subsidiary to those items referencing item P-610.

BASIS OF PAYMENT

610-5.1 Flapper Gate Lift System Support Wall shall be made at the contract lump sum price and shall constitute full payment for all Work described in this section.

Payment will be made under:

Item P-610a.1 Flapper Gate Lift System Concrete Support Wall – Lump Sum

TESTING REQUIREMENTS

AASHTO T 22	Compressive Strength of Cylindrical Concrete Specimens
AASHTO T 26	Quality of Water to be used in Concrete
ATM 506	Making & Curing Concrete Test Specimens in the Field
ATM 304	Sieve Analysis of Aggregates & Soils
ATM 503	Slump of Freshly Mixed Concrete
ATM 505	Air Content of Freshly Mixed Concrete by the Pressure Method
ATM 501	Sampling Freshly Mixed Concrete

MATERIAL REQUIREMENTS

AASHTO M 6	Fine Aggregate for Portland Cement Concrete
AASHTO M 31	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
AASHTO M 43	Sizes of Aggregate for Road and Bridge Construction
AASHTO M 54	Fabricated Deformed Steel Bar Mats for Concrete Reinforcement
AASHTO M 55	Steel Welded Wire Reinforcement, Plain, for Concrete
AASHTO M 80	Coarse Aggregate for Portland Cement Concrete
AASHTO M 85	Portland Cement
AASHTO M 148	Liquid Membrane-Forming Compounds for Curing Concrete
AASHTO M 154	Air-Entraining Admixtures for Concrete
AASHTO M 157	Ready-Mixed Concrete
AASHTO M 171	Sheet Materials for Curing Concrete
AASHTO M 194	Chemical Admixture for Concrete
AASHTO M 213	Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
AASHTO M 221	Steel Welded Wire Reinforcement, Deformed, for Concrete
AASHTO M 295	Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
AWS D12.1	Recommended Practices for Welding Reinforcing Steel, Metal Inserts and Connections in Reinforced Concrete Construction

ITEM P-670 HAZARDOUS AREA BARRIERS

DESCRIPTION

670-1.1 Provide barriers for use on the project under SECTION 01 5200 SAFETY AND SECURITY. Provide each barrier complete with flasher unit and flag in accordance with the dimensions, design, and details shown on the Plans. Haul and place barriers as shown on the Plans or as directed by the Engineer. Relocate barriers as conditions warrant.

When used during periods of darkness, such barricades, warning signs and hazard markings shall be suitably illuminated. Barricades shall be spaced as specified on the plans and in the Construction Safety and Phasing Plan.

Provide additional flasher units and flags, when specified, for use on Owner-supplied barriers.

MATERIALS

670-2.1 Use materials that conform to the following:

- a. **Hazard Marker Barrier, Timber.** Provide construction-grade Douglas Fir-Larch with nominal dimensions of 12 inches x 12 inches and a length of 8 feet. Use pressure treated wood with a preservative salt retention of not less than 0.6 lbs/ft³, kiln dried after impregnation, and conforming to the American Wood Preservers Bureau (AWPB) FDN Standard. Provide timbers that bear the AWPB Quality Mark of an approved inspection agency as described in the AWPB Standard. Use either oil base or latex exterior paint in colors international orange and white.
- b. **Hazard Marker Barrier, Plastic.** Provide 10 inch x 10 inch by 8 foot nominal dimension portable water-ballast barriers made from high impact, safety orange and white, UV-resistant, high density polyethylene (HDPE) plastic. Provide barriers with pre-molded flag staff and flasher bracket attachment holes. Provide barriers that are designed as a modular system to allow assembly/disassembly and nesting for compact storage, and to permit the option of physically bolting multiple barriers together to provide a continuous barrier wall. Provide 6-inch x 72-inch reflective striping panel for attachment to one side of each barrier.

670-2.2 Flag. Provide heavy vinyl coated nylon, 18 inch x 18 inch flag with an integral diagonal metal or plastic stay to make the flag self-supporting. Provide flag in color fluorescent orange and mounted on a ¾ inch x 30-inch staff.

670-2.3 Flasher Unit. Provide battery-operated omnidirectional flashing red light. Provide flasher unit with mounting bracket designed for the appropriate barrier type.

- a. **Flasher Unit for Timber Barrier.** Meet Manual on Uniform Traffic Control Devices (MUTCD) requirements for Type A Warning Lights. Supply one set of non-standard tools, such as the on/off switch or battery access tool, for each 5 flasher units furnished.

Flasher Unit for Plastic Barrier.

Composition	High impact, polycarbonate plastic lens and base
Flashing Rate	60 flashes per minute
Brightness	6000 mcd
LED	Total of 3 red
Photo Cell	Allows for solar light to automatically shut off in higher level light conditions and turn on in lower light conditions

CONSTRUCTION REQUIREMENTS

670-3.1 GENERAL. On the top side and at opposite ends of each barrier, mount one flag and one flasher unit per manufacturer's instructions. Tether flag to the barrier.

a. Hazard Marker Barrier, Timber.

- (1) Preparation.** Prior to painting, notch the underside of each timber to allow for the use of a forklift. Cut two 4 inch high by 12 inch wide notches spaced 36 inches center to center, centered on the long axis of the timber.
- (2) Painting.** Apply one coat of primer and one coat of finish white color paint on all sides and the ends followed by two coats of orange finish paint to form the stripes on the sides. Paint orange stripes 24 inches wide and offset by 6 inches from one side to the next giving a "barber pole" effect.
- (3) Flag and Flasher Unit.** Mount the flag 24 inches from one end of the timber by drilling a hole 1/8 inch larger than the diameter of the staff by 8 inches deep. Mount the flasher unit 24 inches from the opposite end of the timber.

b. Hazard Marker Barrier, Plastic. Fill barriers with water for ballast in accordance with manufacturer's recommendations. When shown on the plans or directed by the Engineer, interlock barrier units using manufacturer recommended connectors to form a continuous wall separating the hazardous work area from aircraft movement areas. Adhere reflective striping panels to one side of each barrier.

670-3.2 DELIVERY. Deliver hazard marker barriers, flasher units, and flags to the project site prior to commencing work within the Air Operations Area.

670-3.3 STORAGE. Following completion of the project, remove flasher units and flags from the barriers. Remove batteries from flashers. Barriers, flasher units, and flags are the property of the Owner. Drain plastic barriers. Deliver to a location on the Airport designated by the Engineer.

670-3.4 MAINTENANCE. Maintain barriers, flashers, and flags in serviceable condition. Replace plastic barriers which no longer hold water ballast. Replace flashers when no longer working. Replace flags when the remaining area of the flag is less than 75% of the original flag area.

METHOD OF MEASUREMENT

670-4.1 Hazard marker barriers, complete with flag and flasher unit will be subsidiary to other work.

ITEM T-901 SEEDING

DESCRIPTION

901-1.1 This work consists of preparing the ground and applying seed and fertilizer in conformance with the Plans and Specifications.

The intent of this work is to provide a living vegetative cover in the areas indicated on the Plans and to maintain the cover for the term of the Contract.

MATERIALS

901-2.1 SEED. Furnish the seed mixture listed in below.

Meet the applicable requirements of the State of Alaska Seed Regulations, 11 AAC 34, Articles 1 and 4.

Meet or exceed 90% pure seed and 85% germination.

Furnish 4 signed copies of a report for each lot of seed, certifying it has been tested by an approved laboratory within 9 months of date of seed application. Submit these certifications no later than 10 days prior to seeding. Seed certificates shall be removed from bags on site and submitted to the Engineer prior to installation. Include the following in each certification:

- a. name and address of laboratory
- b. date of test
- c. lot number
- d. seed name
- e. percent pure seed
- f. percent germination
- g. percent weed content
- h. percent inert matter

901-2.2 REVEGETATION SEED MIX. Conform to the following:

Schedule - A Revegetation Seed Mix

Name	Proportion By Weight	Purity	Germination
Arctared Fescue (Festuca rubra)	90%	90%	85%
Annual ryegrass (Lolium multiflorum)	10%	90%	85%

901-2.3 FERTILIZER. Furnish a 20-20-10 fertilizer containing no cyanamid compounds or hydrated lime. Tolerances of the chemical ingredients shall be plus or minus 2%.

Use standard commercial fertilizer supplied separately or in mixtures, and in moisture proof containers. Mark each container with the total net weight and with the manufacturer's guaranteed analysis of the contents showing the percentage for each ingredient.

CONSTRUCTION METHODS

901-3.1 SOIL PREPARATION. Clear all areas to be seeded of stones 4 inches in diameter and larger and of all sticks, stumps, noxious weeds, and other debris or irregularities that might interfere with the seeding operation, growth of grass, or subsequent maintenance of the grass covered areas.

Just prior to seeding, roughen the surface of all areas to be seeded by track-walking transversely up and down the slopes or using a scarifying slope board. Round the top and bottom of the slopes, when necessary, to facilitate tracking and to create a pleasing appearance, but do not disrupt drainage flow lines. Where fill is adjacent to wetlands, keep the equipment entirely on the fill slope.

901-3.2 SEEDING SEASONS. Seed and fertilize between May 15 and August 15.

Do not seed during windy conditions or when climatic conditions or ground conditions would hinder placement or proper growth.

901-3.3 APPLICATION. Apply seed and fertilizer at the rates specified below the Special Provisions. Use either of the following methods:

Apply seed uniformly at a rate of 153 lbs per acre. Apply fertilizer uniformly over the area to be seeded at a rate of 500 pounds per acre.

a. Hydraulic Method.

- (1) Mix a slurry of seed, fertilizer, water, and other components as required by the Special Provisions. Add seed to the slurry mixture no more than 30 minutes before application.
- (2) Use hydraulic seeding equipment that will maintain a continuous agitation and apply a homogeneous mixture through a spray nozzle. The pump must produce enough pressure to maintain a continuous nonfluctuating spray that will reach the extremities of the seeding area, without causing damage to the seed bed. Use a hose attachment to reach areas where a fixed nozzle cannot reach.
- (3) If mulch material is required, add it to the water slurry in the hydraulic seeder after adding the proportionate amounts of seed and fertilizer.
- (4) Apply slurry at a rate that distributes all materials evenly.

b. Dry Method.

- (1) Use mechanical spreaders, seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders, or other approved mechanical spreading equipment.
- (2) Moisten the soil prior to the application of seed and fertilizer and immediately afterwards.
- (3) Mix or rake the seed and fertilizer into the seed bed to a depth of 1/2 inch, unless mulch material is to be applied immediately.

901-3.4 MAINTENANCE OF SEEDED AREAS. Protect seeded areas against traffic using approved warning signs or barricades. Repair surfaces that are gullied or otherwise damaged following seeding by regrading and reseeding, as directed. Maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

Keep temporary erosion control measures in place until the vegetation is accepted.

Water the seeded areas, as required, for proper germination and growth. Use equipment that can acceptably water all seeded areas without vehicular traffic on seeded areas.

Reseed any seeded areas not showing evidence of satisfactory growth, as directed.

901-3.5 FINAL ACCEPTANCE. Final acceptance will be based on the following criteria and must provide 70% vegetative coverage of the seeded area. If seeding is completed by July 15th, coverage must be attained by September 30th. If seeding is completed by August 15th, coverage must be attained by June 15th of the following season. Final acceptance will be based on the Engineers approval.

METHOD OF MEASUREMENT

901-4.1 The work will be measured according to Subsection 90-02, and as follows:

- a. **Seeding by the square yard.** By the area of ground surface acceptably seeded, fertilized, and maintained. Required reseeding is subsidiary.

BASIS OF PAYMENT

901-5.1

Seeding by the Square Yard. Payment is for established vegetative matt. Soil preparation, fertilizer, and water required for hydraulic method are subsidiary.

Water for Seeding. Water applied for growth of vegetative matt. Water for hydraulic seeding, fertilizing, or mulching is subsidiary. Water after project completion is subsidiary.

Payment will be made under:

Item T-901a Seeding – Square Yard

ITEM T-905 TOPSOIL

DESCRIPTION

905-1.1 This item shall consist of preparing the ground surface for topsoil application, removing topsoil from designated stockpiles or areas to be stripped on the site or from approved sources off the site, and placing and spreading the topsoil on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the Engineer.

MATERIALS

905-2.1 TOPSOIL. Furnish a natural friable surface soil without admixtures of undesirable subsoil, refuse, or foreign materials and reasonably free from roots, clods, hard clay, noxious weeds, tall grass, brush sticks, stubble or other litter, and which is free draining and non-toxic.

The gradation shall conform to selected Class in Table 1 when tested according to ATM 304. If no class is indicated, meet the grading requirements in Table 1 for Class A topsoil.

TABLE 1. TOPSOIL GRADING

Sieve Designation	Percent Passing By Weight	
	CLASS A	CLASS B
3 in.	-	100
1/2 in.	100	-
No. 4	95-100	75-100
No. 16	64-90	50-95
No. 200	30-60	20-80
Organic Matter	10-40	5 min.

Percent of organic matter will be determined by loss-on-ignition of oven dried samples using ATM 203.

When necessary, amend natural topsoil to meet the above specifications, using approved materials and methods.

905-2.2 SALVAGED TOPSOIL. Salvaged topsoil consists of the top 4" to 12" of soils, as referenced vertically from the undisturbed area and newly constructed safety area, and broken-up vegetation derived from the project footprint. The project footprint includes the areas which shall be excavated or covered by fill as part of construction operations. Do not substitute material derived from deeper segments, or material from outside of the project limits without approval of the Engineer. Use topsoil that is free from construction wastes, petroleum byproducts, trash or other manmade materials. Break the vegetation into pieces less than 12" in the longest direction. Mechanically process the removed topsoil and surface vegetation to separate material that does not pass through a screen with 12" square openings.

CONSTRUCTION METHODS

905-3.1 PREPARING THE GROUND SURFACE. Where grades in the areas to be topsoiled have not been established, smooth-grade the areas to the grades shown on the Plans. Maintain the prescribed grades in an even and properly compacted condition to prevent the formation of low places or pockets where water will stand.

Clear the surface of the area to be topsoiled of all stones larger than 2 inches in any diameter and all litter or other material which may be detrimental to proper bonding, the rise of capillary moisture, or the proper growth of the desired planting.

Immediately prior to dumping and spreading the topsoil, loosen the surface, by approved means, to a minimum depth of 2 inches to facilitate bonding of the topsoil to the covered subgrade soil.

905-3.2 OBTAINING TOPSOIL. Prior to the stripping of topsoil from designated areas, remove any vegetation, stumps and large roots, rubbish or stones found on such areas, which may interfere with subsequent operations, using approved methods.

When suitable topsoil is available on the site, remove this material from the designated areas to the depth directed. Spread the topsoil on areas already tilled and smooth-graded, or stockpile in approved areas. Grade the stockpile sites and adjacent areas which have been disturbed if required and put into a condition acceptable for seeding.

When suitable topsoil is secured off the airport site, locate and obtain the supply, subject to approval. Notify the Engineer sufficiently in advance of operations in order that necessary measurements and tests can be made. Remove the topsoil from approved areas and to the depth as directed. Haul the topsoil to the site of the work and stockpile or spread as required.

905-3.3 PLACING TOPSOIL. Spread the topsoil evenly on the prepared areas to a uniform depth of 4 inches after compaction. Do not spread when the ground or topsoil is frozen or excessively wet.

After spreading, break up any large stiff clods and hard lumps with a pulverizer or other effective means. Rake up and dispose of all stones or rocks (2 inches or more in diameter), roots, litter, or any foreign matter. After spreading, compact the topsoil with a cultipacker or by other approved means. The compacted topsoil surface shall conform to the required lines, grades, and cross sections. Promptly remove any topsoil or other dirt falling upon pavements or other surface courses.

Track topsoil with a dozer to make track marks running perpendicular to the direction of drainage.

METHOD OF MEASUREMENT

905-4.1 By the cubic yard, according to SECTION 00 7000 GENERAL CONDITIONS OF THE CONTRACT, Article 9 PAYMENTS AND COMPLETION.
acceptably placed.

BASIS OF PAYMENT

905-5.1 Payment will be made at the contract unit price per cubic yard.

Stockpiling and rehandling of topsoil are subsidiary.

Payment will be made under:

Item T-905a Topsoil – Cubic Yard

TESTING REQUIREMENTS

ATM 304 Sieve Analysis of Aggregates & Soils