



**Facilities Planning  
& Construction**

UNIVERSITY *of* ALASKA ANCHORAGE

**INVITATION FOR BID**

**UAA PSB ROOF REPLACEMENT**

**Anchorage, Alaska**

**PROJECT NO.: 14-0040**

**BID NUMBER: 17-05**

**Building Name: Professional Studies Building**

**Building Number: AS111**

**ISSUED: March 16, 2017**

**FACILITIES PLANNING AND CONSTRUCTION  
3890 UNIVERSITY LAKE DRIVE, SUITE 110  
ANCHORAGE, AK 99508-4669  
(907) 786-4900**

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### UAA BID NO. 17-05

UAA PSB Roof Replacement  
Project No. 14-0040  
Building Name: Professional Studies Building  
Building No. AS111

Date Issued: March 16, 2017  
Pre-Bid: March 23, 2017 @ 10:00 AM  
Alternate Brand Request Submission Deadline: March 28, 2017 @ 2:00 PM  
Last Date to Submit Questions: April 4, 2017 @ 2:00 PM  
Last Date to Issue Addenda: April 5, 2017  
Bid Due Date: April 11, 2017 @ 2:00 PM AKST

### **NOTE**

Dates shown on this document are for general information only and are subject to change. Specific contractual dates for the Bid Opening, Pre-Bid Conference, Alternate Brand Request, and Questions are set forth in the Instructions to Bidders, General Conditions, and the Notice of Invitation to Bid. Any modification of the above dates by addendum will modify the contract documents, not this summary.

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**IMPORTANT**

**This Invitation for Bid conforms to the State Procurement Code for the State of Alaska. Bidders are strongly advised to study the bid documents very carefully and be fully aware of the revisions made to these pages to conform to AS 36.30.**

**THE WORK PERFORMED IN CONJUNCTION WITH THIS IFB IS SUBJECT TO THE STATE OF ALASKA TITLE 36 PUBLIC CONTRACTS PREVAILING WAGE RATES.**

**If you have any questions, please call Facilities Planning & Construction's Fiscal Manager, Sandra Blum at 907-786-4905.**

**Clarification on Alaska Bidder Preference and Alaska Product Preference can be viewed on line at**

**<http://commerce.alaska.gov/dnn/ded/dev/AlaskaProductPreferenceProgram.aspx>**

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## NOTICE OF INVITATION FOR BIDS

**PROJECT:** UAA PSB ROOF REPLACEMENT  
**PROJECT NO.:** 14-0040  
**BID NO.:** 17-05  
**BUILDING NAME:** PROFESSIONAL STUDIES BUILDING  
**BUILDING NUMBER:** AS111

Sealed bids, in single copy, for **UAA PSB Roof Replacement**, will be received by the University of Alaska Anchorage, Facilities Planning and Construction until **April 11, 2017 at 2:00 pm** prevailing time, at 3890 University Lake Drive, Suite 110, Anchorage, AK 99508, at which time bids will be publicly opened and read aloud.

**The work consists of removal of a concrete paver ballast on XPS insulation over built-up asphalt roof system. Installation of a new mineral cap surfaced, built-up asphalt roof system with insulation and vapor retarder. A bid alternate of new metal siding is included. Project includes roof related carpentry, insulation, metal flashing, roof drainage and minor electrical and mechanical work located at:**

**Professional Studies Building  
2533 Providence Drive  
Anchorage, AK 99508**

A pre-bid conference will be held on **March 23, 2017 at 10:00 am, onsite at 3890 Providence Drive, Suite 110A, Anchorage, AK 99508.**

All bids must be accompanied by a bid bond provided by a surety authorized to do business in the State of Alaska on a form provided herein, or a cashier's check. Bid security must be in an amount equal to at least five percent (5%) of the maximum amount of the bid.

Questions regarding this IFB shall be directed, in writing, to UAA Facilities Planning & Construction at **uaa\_fpc@alaska.edu** for action.

Complete bidding documents for this project are available in electronic form. They may be viewed online and downloaded without charge and without deposit from [www.aeplans.com](http://www.aeplans.com). Contact Mike Strock at AEPlans, LLC at 877-287-4905, extension 208 for information regarding access to AEPlans site and instructions for viewing and downloading construction drawings, specifications and addenda.

Bidders must register through the web site to be notified of addenda. Bid documents are not available from the Architect or the Owner, but they may be obtained from most plan rooms and reprographic firms for a fee. Printed copies may be ordered from reprographic companies through the website or by contacting a reprographer directly.

Downloaded files may be printed on the plan holder's equipment. Plan holders are responsible for their own reproduction costs. Please go to [www.aeplans.com](http://www.aeplans.com) to download the UAA project documents, for distribution to your members. No hard copies will be sent. Addenda to the project will be posted on the

website. The bidder is responsible for periodically checking the site. The Contractor that is awarded the project will be responsible for printing all documents necessary for performing the work.

Prime Bidders, Sub Contractors and Suppliers obtaining bid documents are cautioned not to obtain partial or incomplete sets of bid documents (drawings and specifications) for the purposes of bidding. It is the responsibility of the bidder(s) to insure that complete sets of bid documents as posted on AEPlans are obtained. Neither the Owner nor the Architect shall be held responsible for errors in downloading or the printing of incomplete sets of documents by the bidder(s).

BIDDERS ARE ADVISED THE UNIVERSITY OF ALASKA HAS A PROCEDURE FOR ACCEPTING EQUAL PRODUCTS OR SYSTEMS PRIOR TO BID OPENING. SUBSTITUTIONS AFTER AWARD ARE LIMITED. SEE INSTRUCTIONS TO BIDDERS AND THE GENERAL CONDITIONS.

Sealed envelopes containing bids must be marked as follows:

**Upper Left Hand Corner:**

**Name of Bidder**

**City, State, Zip Code**

**Center of Envelope:**

**SEALED BID - DO NOT OPEN**

**PROJECT: UAA PSB ROOF REPLACEMENT**

**PROJECT NO: 14-0040**

**BID NO: 17-05**

**BUILDING NAME: PROFESSIONAL STUDIES BUILDING**

**BUILDING NUMBER: AS111**

**Deliver or Mail Envelopes to:**

**UNIVERSITY OF ALASKA ANCHORAGE  
FACILITIES PLANNING AND CONSTRUCTION  
3890 UNIVERSITY LAKE DRIVE, SUITE 110  
ANCHORAGE, AK 99508-4669**

**NOTE: Mailed bids must be received by the UAA Facilities Planning and Construction before the bid due date and time.**

The University of Alaska Anchorage is an affirmative action/equal opportunity employer and educational institution.

## INSTRUCTIONS TO BIDDERS

Bids to be entitled to consideration must be made in accordance with the following instructions:

### 1. INVITATION FOR BIDS

Bidders shall familiarize themselves with the requirements of all of the Invitation for Bid (contract documents) including the Instructions to Bidders, the Bid Form, the Agreement, the General Conditions, the Special Conditions, the Specifications, the Drawings, any addenda issued prior to the receipt of bids, and any other documents referenced or referred to therein.

### 2. EXAMINATION OF SITE

A. Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the Work and the general and local conditions unique to this project which can affect the Work or the cost of the Work, including but not limited to:

- 1) Conditions bearing upon transportation, disposal, handling, and storage of materials;
- 2) The availability of labor, water, electric power, and roads;
- 3) Uncertainties of weather, river stages, tides, or similar physical conditions at the sites;
- 4) The conformation and conditions of the ground; and
- 5) The character of equipment and facilities needed preliminary to and during work performance.

B. Any failure of the Bidder to take the actions described and acknowledged in this paragraph will not relieve the Bidder from responsibility for estimating properly the difficulty and cost of successfully performing the Work.

### 3. EXAMINATIONS AND INTERPRETATION OF DOCUMENTS

Each bidder shall examine the Invitation for Bid carefully and shall make written requests to the Owner for interpretation or correction of any ambiguity, inconsistency, discrepancy, omission, or error therein which the bidder may discover. Any interpretation or correction will be issued in an addendum by the Owner. Only a written interpretation shall be binding. No bidder shall rely on any interpretation or correction given by any other method. If the Bidder is not satisfied with the Owner's response, the Bidder must file a protest in accordance with paragraph 6. Failure to file such a protest constitutes waiver of the issues that could have been brought in the protest.

### 4. "OR EQUAL" PRODUCTS

Whenever a material, article, piece of equipment or system is identified in the Invitation for Bid by reference to manufacturers' or vendors' name, trade names, catalog numbers, etc., it is intended to establish a minimum standard. Unless otherwise noted, alternate brands of any material, article, equipment or system of other manufacturers or vendors which will perform adequately the duties imposed by the general design of the project will be considered equally acceptable; provided the material, article, equipment, or system so proposed is, in the opinion of the Owner, of equal substance, function, dimension, appearance, and quality.

Alternate brands may be approved if found by the Owner to be equal or better. A written request on the form provided must be submitted to the Owner for approval a minimum of fourteen (14)

calendar days in advance of the bid opening with description, catalog cuts, etc., and other information as may be required by the Owner for proper evaluation of the request. Any brand named product listed in the technical specification followed by the phrase "or equal" is understood to mean an alternate product, which, if presented, must be presented prior to bid opening as provided herein.

If in the opinion of the Owner an alternate brand is determined to be of equal substance, function, dimension, appearance, and quality, an addendum shall be issued to all parties who have been furnished an Invitation for Bid for bidding purposes.

#### **5. ADDENDA**

The Owner may modify the Invitation for Bid no later than five (5) calendar days prior to the date fixed for opening of bids by issuance of an addendum to all parties who have been furnished Invitation for Bid for bidding purposes. In determining the intervening calendar days between issuance of an addendum and bid opening, neither the day the addendum is issued nor the day of the bid opening is counted. An addendum may be issued up to and through the date fixed for opening the bids. If an addendum is issued on the date scheduled for bid opening bid date shall be extended in that addendum to allow at least the previously stated number of intervening days between issuance of an addendum and bid opening. Bidders must acknowledge receipt of all addenda on the Bid Form.

#### **6. PROTESTING SOLICITATION OR AWARD**

Any protest of the technical specifications or bid requirements of this solicitation (Invitation for Bid) shall be filed in writing with the Contracting Officer (Procurement Officer) of the issuing office not later than 5:00 p.m. of the seventh (7th) day preceding the date set for bid opening. Protests of the technical specifications or bid requirements resulting from addenda to this solicitation shall be filed with the issuing office not later than 5:00 p.m. of the fifth (5th) day following date of issue of the addendum. Protests filed after the above times shall not be considered.

A bidder may protest the award of a contract provided its protest is received within ten (10) calendar days of the date of issuance of a Notice-of-Intent-to-Award-a-Contract. Protests of an award or a proposed award shall be resolved in accordance with AS 36.30.560.699, Board of Regents Policies, and University of Alaska Procurement Regulations.

#### **7. BID FORM**

Bids must be submitted on the forms provided by the Owner, completed in all respects as required by the Bid Form and Invitation for Bid, and manually signed by an authorized official of the bidder. Bidders may make copies of the bid forms for submission of bids.

#### **8. SUBMISSION OF BID**

Bids must be submitted in a sealed envelope, marked with Bidder's name, project title and opening time, and addressed as directed in the Notice of Invitation For Bid and must be delivered to the office designated in the Notice of Invitation For Bid prior to the exact time set for opening bids. Bids must be signed by authorized persons and shall have original signatures. Bid shall be accompanied by bid security, addendum acknowledgement and such other material or information required by the Invitation For Bid. No bidder shall transmit a bidding document by facsimile

transmission (FAX), including but not limited to, bid forms, bid bonds, and modifications.

Each bidder must have a valid Alaska Business License, required under AS 36.30.110 (b), at the time the contract is awarded. To qualify as an Alaska Bidder a bidder shall have a valid business license at the time the bid is opened. The bidder must also be registered as required under AS 08.18. The registration and license numbers must be supplied on the bid form at time of bid. Within five (5) working days of the Owner's written identification of the apparent low bidder, or notice-of-intent-to-award a contract, the selected bidder will provide copies of its valid Alaska Business License and Contractor's Registration.

## **9. BID SECURITY**

- A. All bids must be accompanied by a bid bond provided by a surety authorized to do business in the state of Alaska on a form provided herein, or a cashier's check. Bid security must be in an amount equal to at least five (5) percent of the maximum amount of the bid.
- B. Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.
- C. The bid securities of the three lowest bidders will be held by the Owner until the Contract has been finally executed, but no longer than 45 calendar days after opening of bids, after which time the bid securities will be returned to such bidders. Bid securities of all other bidders will be returned to them within ten (10) working days after opening of bids.
- D. If the successful Bidder, upon notice of intent to accept its bid by the Owner within the period specified for acceptance, fails to execute all contractual documents or give a bond(s) as required by the solicitation within the time specified, the Contracting Officer may declare the Bidder non-responsive and the amount of its bid guaranty may be retained by Owner as liquidated damages.
- E. If all bids are rejected, the bid securities of all bidders will be returned within ten (10) working days after rejection.

## **10. MODIFICATIONS OR WITHDRAWAL OF BIDS**

Bids may be modified or withdrawn by written notice received in the office designated in the Invitation for Bids prior to the time and date set for bid opening. The signature of the same person who signed the sealed bid form is required on the modification or withdrawal.

Written shall not reveal the bid price, but shall provide the addition, subtraction, or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened.

## **11. BID OPENING**

Bids will be opened in public, read aloud and recorded at the time set for opening in the Notice of Invitation for Bid. Bids may be inspected by bidders and others having a legitimate interest as determined by the Owner only after Notice-of-Intent-to-Award has been issued. Late bids will not be considered.

Within five (5) working days of the Owners identification of the apparent low bidder, as evidenced by the Owners written notification, the selected bidder shall furnish a list of subcontractors it proposes to use in the performance of the work of this project not later than 5:00 p.m. the fifth working day following receipt of written notification. The list must include:

- a. The name and location of place of business of each subcontractor;
- b. The nature of the work subcontracted identified by Technical Specification division and further identified by Section if more than one subcontractor doing work under one division; and
- c. Copies of each subcontractor's Alaska Business License and Certificate of Registration required under AS.43.70 and AS.08.18, respectively.

Failure to supply the information required within the specified time shall be grounds for declaring the low apparent bid non-responsive. If a subcontractor on the list did not have a valid Alaska Business License under AS 43.70 and a valid Certificate of Registration under AS 08.18 at the time the bid was opened, the bidder may not use the subcontractor in the performance of the contract, and shall replace the subcontractor with a subcontractor who had a valid Alaska Business License and Certificate of Registration at the time the bid was opened.

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

A bidder may replace a listed subcontractor if the subcontractor:

- a. fails to comply with AS 08.18, Construction Contractors;
- b. files for bankruptcy or becomes insolvent;
- c. 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;
- d. fails to obtain bonding;
- e. fails to obtain insurance acceptable to the Owner;
- f. fails to perform the contract with the bidder involving work for which the subcontractor was listed;
- g. must be substituted in order for the prime contractor to satisfy required Owner federal affirmative action requirements;
- h. refuses to agree or abide with the bidder's labor agreement or;
- i. is determined by the Owner not to be a responsible subcontractor.

A bidder who attempts to circumvent the requirements of this section by listing as a subcontractor another contractor who, in turn, sublets the majority of the work required under the contract violates this section. If a contract is awarded to a bidder who violates this section, the Owner may:

- a. cancel the contract; or
- b. after notice and a hearing, assess a penalty on the bidder in an amount that does not exceed ten (10) percent of the value of the subcontractor at issue.



## 12. COMPARISONS AND EVALUATION OF BIDS

This Invitation for Bid is prepared for a single general contract unless otherwise stated herein or on the Bid Form.

Before a bid is considered for award all bids will be compared and the lowest responsive and responsible bidder determined. The bidder may be requested by the Owner to supply information demonstrating the prospective contractors satisfactory record of timely performance, his ability and experience in performing comparable work, his business and technical organization, financial resources, plant available, and method of performing the Work, and whether he has ever been terminated on construction work. Failure of the bidder to promptly supply the information may be grounds for a determination of non-responsibility. All information supplied may not be disclosed without written consent of the bidder.

"Alaska Bidders" will be given a five (5) percent preference over non-resident bidders. An "Alaska Bidder" for purpose of bid award is a person who: a) holds a current Alaska Business License, b) submits a bid for goods or services under the name as appearing on his current Alaska Business License, c) has maintained a place of business within the state, staffed by the Bidder or an employee for a period of six months immediately preceding the date of his bid, d) is incorporated or qualified to do business under the laws of the state, e) if a proprietorship or partnership, all have to be resident, and f) if a joint venture, all ventures must qualify under a) through e).

Employment Program Preference: If a bidder qualifies as an "Alaska Bidder" and is offering services through an employment program as defined under AS.36.30.321 it will be given a fifteen (15) percent preference over a nonresident bidder.

Alaskans with Disabilities: If a Bidder qualifies as an Alaska Bidder and the Bidder is (1) a sole proprietorship owned by person with a disability, (2) a partnership where all partners have disabilities, (3) a limited liability corporation where all of the members have disabilities, or (4) a corporation wholly owned by individuals with disabilities, (5) a joint venture that is composed of ventures that qualify under (1)-(4), the Bidder is entitled to a ten (10) percent preference over other Alaska Bidders.

A Bidder may not claim more than one of the two disability related preferences listed above for the same bid. The State of Alaska Department of Labor and Workforce Development, Division of Vocational Rehabilitation maintains a list of qualified employment programs, and a list of individuals who qualify as persons with a disability. In order to claim either of these two preferences, the employment program or person must be on the respective list at the time the bid is opened, and a copy of a certification letter from the Division of Vocation Rehabilitation must be attached to the bid.

Alaska Veteran Preference: If a Bidder qualifies as an Alaska Bidder and the Bidder is a (1) sole proprietorship owned by an Alaska veteran, (2) a partnership where a majority of the partners are Alaska veterans, (3) a limited liability corporation where a majority of the members are Alaska veterans, or (4) a corporation wholly owned by individuals, and a majority of the individuals are

Alaska veterans, the Bidder is entitled to a five (5) percent preference over other Alaska Bidders. The preference may not exceed \$5,000.

To qualify for the Employment Program, Disability or Veteran preferences in this section, a Bidder must add value by actually performing, controlling, managing, and supervising the services provided.

The University and regulations of the Department of Commerce provide a preference to be applied in the evaluation of a bid for the use of Alaska Products (AS.36.30.332), other than timber, lumber or manufactured lumber products, when Alaska Products are specified in an Invitation For Bid. When Alaska Products are specified for use in a project, the product and a quantity shall be stated on Alaska Products Preference Work Sheet (APPW) to the Bid Form. The quantity stated is an estimate used only in the evaluation of bids and may not necessarily be the exact quantity required. The bidder shall include in its bid the cost to provide, and shall provide the correct quantities under an awarded contract. A bid that designates the use of Alaska Products identified in the technical specifications and summarized on APPW and designated as Class I, Class II or Class III products as defined in the Procurement Code is decreased by the percentage of value, below, of the designated Alaska Product:

Class I product is given a three (3) percent preference  
Class II product is given a five (5) percent preference  
Class III product is given a seven (7) percent preference

Where non-brand named products are specified, Alaska Products may be used without approval prior to bid provided they meet the criteria and requirements of the project specifications. The owner will not review non-brand named products prior to bid; however they must be submitted for approval prior to use. The Bidder will be responsible for calculating the quantities and pricing required to complete the Alaska Products Worksheet, which must be submitted with its bid. If the preference, but its application, makes the bidder the apparent low bid and eventually the successful bidder, all other requirements for responsiveness, responsibility and specification compliance having been met, the Bidder shall provide the Owner, as it directs, evidence of the accuracy of its quantities and pricing. Allowing industry margins for waste cutting, if the Bidder's quantities and/or subsequent pricing are incorrect the imbalance shall be corrected, the preference reapplied and the bid reevaluated to determine the apparent low bid.

The bidder shall complete The Alaska Products Preference Work Sheet to the Bid Form and submit with its bid. Explanation and instruction for the bidders understanding and use are on the reverse side of the Work Sheet. Absence of APPW from the bid package will result in a determination that no Alaska Products preference is being claimed.

Notwithstanding the identification of an Alaska Product in the specifications of this project if the bidder desires to have an Alaska Product considered as an equal the procedures under Article 4 of the Instruction to Bidders shall be followed. An "Alaska Product" is defined in AS 36.30. It has been investigated and certified by the Department of Commerce and appears in their publication "Alaska Product Preference List" which may be obtained from the Department of Commerce and Economic Development, PO Box D, Juneau, Alaska 99811.

It is the Owner's intention to award and construct the maximum facility for which funds are available. Alternate bids, if called for, are intended to provide the Owner a range of comparative costs, which will allow identification of the combination most responsive to the Owner's needs and available funds. The bidder must submit bid prices for all alternate bids. Except as otherwise herein stated an apparent low bidder will be identified, and award of the contract will be made on the basis of the base bid plus those alternate bids that the Owner in its sole discretion elects to accept after application of the "Alaska Bidders" preference and an Alaska Products preference.

**13. CANCELLATION OF SOLICITATION; REJECTION OF BIDS**

The Owner may cancel this solicitation if it determines that it no longer requires the construction, or it can no longer reasonably expect to fund the project, or that there need to be major design revisions. The Owner also reserves the right to waive minor or immaterial defects or irregularities in a bid, or to reject any and all bids.

**14. MISTAKE IN BID**

Where a bidder claims to have made a mistake, such a mistake must be called to the attention of the Owner and documented with proof of evidential value within five calendar days after opening of bids. If a bidder clearly and convincingly demonstrates that a mistake other than a minor informality was made the bidder may withdraw the bid and the bid bond shall be returned. However, if the mistake is attributable to an error in judgment, the bidder forfeits the bid bond or other bid security.

If the Owner determines that it has made a material mistake in the Invitation for Bid before the contract has been awarded, it may correct the error if it determines that no competitive harm would result, or it may cancel the solicitation.

**15. PERIOD FOR ACCEPTANCE OF BIDS**

The bids shall remain valid for at least sixty (60) days after the opening date for submission of bids except as otherwise specified elsewhere in this solicitation.

**16. AWARD OF CONTRACT**

The lowest responsive and responsible bidder will be issued a Notice-of-Award, if at all, within 30 calendar days after the opening of bids, or within such extended period of time as agreed in writing between the Owner, the bidder concerned, and its surety.

The use of the term "days" shall refer to calendar days unless otherwise specified. The time in which to act is computed by excluding the day of the act, event, or notice and including the last day. If the last day of the prescribed deadline or time period falls on a Saturday, Sunday or other holiday when the University is closed, the deadline or time period will be extended until the end of the next day that the University is open for business.

**17. EXECUTION OF CONTRACT**

The contract must be signed by the bidder whose bid is identified as the apparent low bid and returned within ten (10) calendar days of the contractor's receipt of written Notice-of-Intent-to-Award-a-Contract, together with a payment bond and performance bond, on

forms provided by the Owner and certificates of insurance showing the different types, coverage and limits as required. Notice-of-Intent-to-Award-a-Contract does not create any obligation of the Owner to make a formal award nor does it constitute a notice to proceed with any of the work. The Notice-of-Intent-to-Award may be issued simultaneously with identification of low apparent bidder for purposes of obtaining a subcontractors list. The time requirements and non-responsive consequences apply as stated under Bid Opening of these Instructions to Bidders.

**18. FAILURE TO EXECUTE CONTRACT**

If the bidder to whom the Contract is awarded refuses or neglects to execute it, or fails to furnish the required contract security and proof of insurance within the time specified, the Owner may declare the Bidder non-responsive and the amount of his bid security may be retained by the Owner as liquidated damages.

**19. ALASKA FOREST PRODUCTS PREFERENCE**

The Bidder is advised that whenever timber, lumber, and manufactured lumber products are required in this Project, only products originating in this State from local forests shall be used wherever practicable. Refer to the General Conditions for the complete Alaska Forest Products requirements under this Contract.

**20. PRE-BID CONFERENCE**

At a time and place called out in the Notice of Invitation for Bid or by special notice, a pre-bid conference may be held. All prospective bidders are invited to attend the conference.

Conferees will be invited to comment on the bid documents or to raise questions, which may require explanation. If deemed necessary by the Owner, an addendum to the bid documents will be issued reflecting conclusions resulting from the conference.

The Owner, the principal consultants, and the architects of the project, will attend the conference together with all interested bidders.

END OF INSTRUCTIONS TO BIDDERS

## BID FORM FOR LUMP SUM CONTRACT

**PLACE:** Anchorage, Alaska

**DATE:** \_\_\_\_\_

**PROJECT:** UAA PSB ROOF REPLACEMENT

**PROJECT NO.:** 14-0040  
**BID NO.:** 17-05  
**BUILDING NAME:** PROFESSIONAL STUDIES BUILDING  
**BUILDING NUMBER:** AS111

Bid of \_\_\_\_\_ (hereinafter called the **Bidder**), a corporation, organized and existing under the laws of the State of \_\_\_\_\_ a partnership, or an individual doing business as \_\_\_\_\_ to the University of Alaska, Anchorage, Alaska (hereinafter called the **Owner**).

- A. **Bidder**, in compliance with your invitation for bids for the construction of the Project indicated above, having examined the plans and specifications with the related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the Project in accordance with the Contract Documents, within the time set forth therein, and for the price stated below.
- B. The **Bidder** hereby agrees to commence work under the Contract on a date to be specified in the written Notice of Award of the **Owner** and to fully complete the Project within the time stipulated in the Contract Documents. The **Bidder** further agrees to pay all applicable liquidated damages in the sums, as set forth in the Contract Documents.
- C. The **Bidder** acknowledges receipt of the following addenda:

ADDENDUM \_\_\_\_\_ DATE \_\_\_\_\_

ADDENDUM \_\_\_\_\_ DATE \_\_\_\_\_

ADDENDUM \_\_\_\_\_ DATE \_\_\_\_\_

ADDENDUM \_\_\_\_\_ DATE \_\_\_\_\_

ADDENDUM \_\_\_\_\_ DATE \_\_\_\_\_

Bidder: \_\_\_\_\_

**D. BASE BID AMOUNT:**

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(In Words) (In Figures)

**E. ADDITIVE/DEDUCTIVE ALTERNATES:**

**ALTERNATE #1 - ADDITIVE - NEW METAL SIDING**

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(In Words) (In Figures)

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

Within Ten (10) days from date of written Notice-of-Intent-to-Award, the **Bidder** agrees to provide the required Insurance, Performance and Payment Bonds and execute the formal Agreement between **Owner** and Contractor. Bidder also agrees to provide a list of its subcontractors' names, addresses, specialty and Alaska Business License and Registration numbers by 5:00 P.M. on the fifth working day following receipt of written identification as APPARENT LOW BIDDER. Subcontractors must possess license and registration at time of bid opening.

G. THIS PROJECT IS SUBJECT TO THE EQUAL EMPLOYMENT OPPORTUNITY (EEO) REQUIREMENTS OF EXECUTIVE ORDERS 11246 AND 11625. THE BIDDER IS ADVISED THAT IN SIGNING THIS BID FORM HE IS MAKING CERTIFICATIONS REGARDING HIS EQUAL EMPLOYMENT OPPORTUNITY PRACTICES. SEE GENERAL CONDITIONS ARTICLE 49.

H. The undersigned hereby indicates its election regarding the following preferences:

Alaska Bidder Preference \_\_\_\_\_ Claims Preference  
\_\_\_\_\_ Does Not Claim Preference

Alaskans with Disabilities Preference \_\_\_\_\_ Claims Preference  
\_\_\_\_\_ Does Not Claim Preference

Alaska Veteran Preference \_\_\_\_\_ Claims Preference  
\_\_\_\_\_ Does Not Claim Preference

Employment Program Preference \_\_\_\_\_ Claims Preference  
\_\_\_\_\_ Does Not Claim Preference

If no election is made it will be determined the **Bidder** does not claim the preference.

If **Bidder** claims an "Alaska Products" preference he must complete Alaska Products Preference Work Sheet to this Bid Form. Failure of the **Bidder** to supply Alaska Products Preference Work Sheet at bid opening will result in an evaluation that no Alaska Products Preference is being claimed.

Alaska Products Preference: \_\_\_\_\_ Claims Preference(s)  
\_\_\_\_\_ Does Not Claim Preference(s)

**Refer to Instructions to Bidders, Section 12 and AS.36.30.321 for criteria to qualify for the preferences**

- I. The Bidder certifies that it possesses the following license and registration and submits the corresponding numbers as evidence.

Alaska Business License # \_\_\_\_\_

Contractor Registration (AS 8.18) # \_\_\_\_\_

Respectfully submitted,

\_\_\_\_\_  
Print Name Clearly

Signed by: \_\_\_\_\_

Title: \_\_\_\_\_

(Seal if bid by Corporation)

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_

Federal Tax I.D. No.: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email \_\_\_\_\_

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**BID BOND**

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, \_\_\_\_\_  
\_\_\_\_\_ as Principal, and \_\_\_\_\_  
\_\_\_\_\_ as Surety, are hereby held and firmly bound onto \_\_\_\_\_  
\_\_\_\_\_ as Owner in the penal sum of  
\_\_\_\_\_ for the payment of which, well and  
truly to be made, we hereby jointly and severally, bind ourselves, our heirs, executors, administrators,  
successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to \_\_\_\_\_  
\_\_\_\_\_ a certain Bid, attached hereto and hereby made a part  
hereof, to enter into a contract in writing for the \_\_\_\_\_

NOW, THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the KM penal amount of this obligation as herein stated. The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bonds shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid, and said Surety does hereby waive notice of any such extension.

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

Signed this \_\_\_\_ day of \_\_\_\_\_, 2017

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

SEAL

By: \_\_\_\_\_

CONTRACT DOCUMENTS

UAA PSB ROOF REPLACEMENT

PROJECT NO. 14-0040

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PO# \_\_\_\_\_

**AGREEMENT  
Between  
OWNER  
And  
CONTRACTOR**

Date of Contract: \_\_\_\_\_

**THIS AGREEMENT** made by and between: **UNIVERSITY OF ALASKA**, Anchorage, Alaska, (hereinafter called "Owner"), and \_\_\_\_\_, (hereinafter called "Contractor").

The Owner and the Contractor agree as set forth below:

Article 1. Work

The Contractor shall perform all the Work required by the Contract Documents for the following project:

**UAA PSB ROOF REPLACEMENT**  
**PROJECT NO.:** 14-0040  
**BID NO.:** 17-05  
**BUILDING NAME:** PROFESSIONAL STUDIES BUILDING  
**BUILDING NUMBER:** AS111

It is agreed that for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Owner or its assignee, the Contractor hereby agrees with the Owner to commence and complete the construction described as follows:

Supply and installation of the entire Work as contained in the proposal submitted, (hereinafter called the "Work"), at a cost not to exceed the proposal price and to furnish all the materials, supplies, machinery, equipment, superintendents, labor, insurance, and other accessories and services necessary to complete said Work in accordance with the conditions stated in the Contract Documents.

Article 2. Time of Commencement and Completion

Contractor hereby agrees to commence Work under this Agreement on a date to be specified in a written "Notice-of-Award" from the Owner and to complete the Work within the time stated in the Special Conditions.

**The Contract Completion Date is: August 3, 2017**

Article 3. The Architect/Engineer for this project is:

Bezek Durst Seiser  
3330 C Street, Suite 200  
Anchorage, Alaska 99503  
Telephone: 907.562.6076

Article 4. Contract Sum

The Owner shall pay the Contractor under provisions of the Contract Documents for the performance of the Work, subject to additions and deductions by change order as provided in the Contract conditions, in current funds, the Contract Sum of \_\_\_\_\_ (\_\_\_\_\_). The attached bid sheets form an integral part of this Agreement.

Article 5. Contract Documents

5.1 The Contract Documents consist of this Agreement and documents listed hereinafter, (hereinafter called "Contract Documents"), and all are incorporated herein by reference and are as fully a part of the Contract as if attached to this Agreement or repeated herein.

Invitation for Bids  
Instructions to Bidders  
General Conditions  
Special Conditions  
University of Alaska Forms  
Laborers' and Mechanics' Minimum Rates of Pay  
Technical Specifications  
Addendum Numbers X, X  
Contractor's Bid Form  
Notice of Award

5.2 In the event that any provision of one Contract Document conflicts with a provision of any other Contract Document, the provision of that Contract Document first listed shall govern, except as otherwise specifically stated:

- a. This Agreement
- b. Exhibits, attachments, etc. incorporated herein by reference.
- c. Instructions to Bidders
- d. The Special Conditions
- e. Special written instructions to the Contractor, if any.
- f. The General Conditions
- g. Manufacturer's instructions with reference to approved materials.
- h. The Technical Specifications.
- i. The Contract Drawings

This Agreement and all covenants hereof shall inure to the benefit of and be binding upon the Owner and the Contractor, respectively, and their partners, successors, assigns, and legal representatives.

Article 6. Progress and Final Payments

- 6.1 Payment shall be made to the Contractor by the Owner, or his assigns, based upon amount of the approved Contractor's estimate of Work completed and value of materials suitably stored on site up to last day of month less any retainer required by the Owner in accordance with General Conditions Article No. 35.
- 6.2 Final payment, constituting the final unpaid balance of the contract sum, including retainer, shall be paid by the Owner, or his assigns to the Contractor. Final payment shall be due to the Contractor within thirty (30) days after receipt of this Contractor's Work by the Owner.

Article 7. Miscellaneous

- 7.1 Any notice of communication which either party desires to give the other party which affects the contract sum of this Agreement shall be given in writing, and either shall be personally delivered to the other party's representative or deposited in the United States mail as registered mail with all postage prepaid, and if given by the Contractor to the Owner, then addressed as follows:

University of Alaska Anchorage  
Facilities Planning and Construction  
Attention: Kim Mahoney, Director  
3890 University Lake Drive, Suite 110  
Anchorage, AK 99508-4669

Telephone: 907.786.4900  
Fax: 907.786.4901

uaa\_fpc@alaska.edu

If given by the Owner to the Contractor, then addressed as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**IN WITNESS WHEREOF**, the parties have made and executed this Agreement to be effective the day and year first above written.

\_\_\_\_\_, **Contractor**

**UNIVERSITY OF ALASKA, Owner**

All Required BOR Approvals obtained.

By: \_\_\_\_\_  
Name & Title

By: \_\_\_\_\_  
Howie Morse, Project Manager      Date  
UAA Facilities Planning & Construction

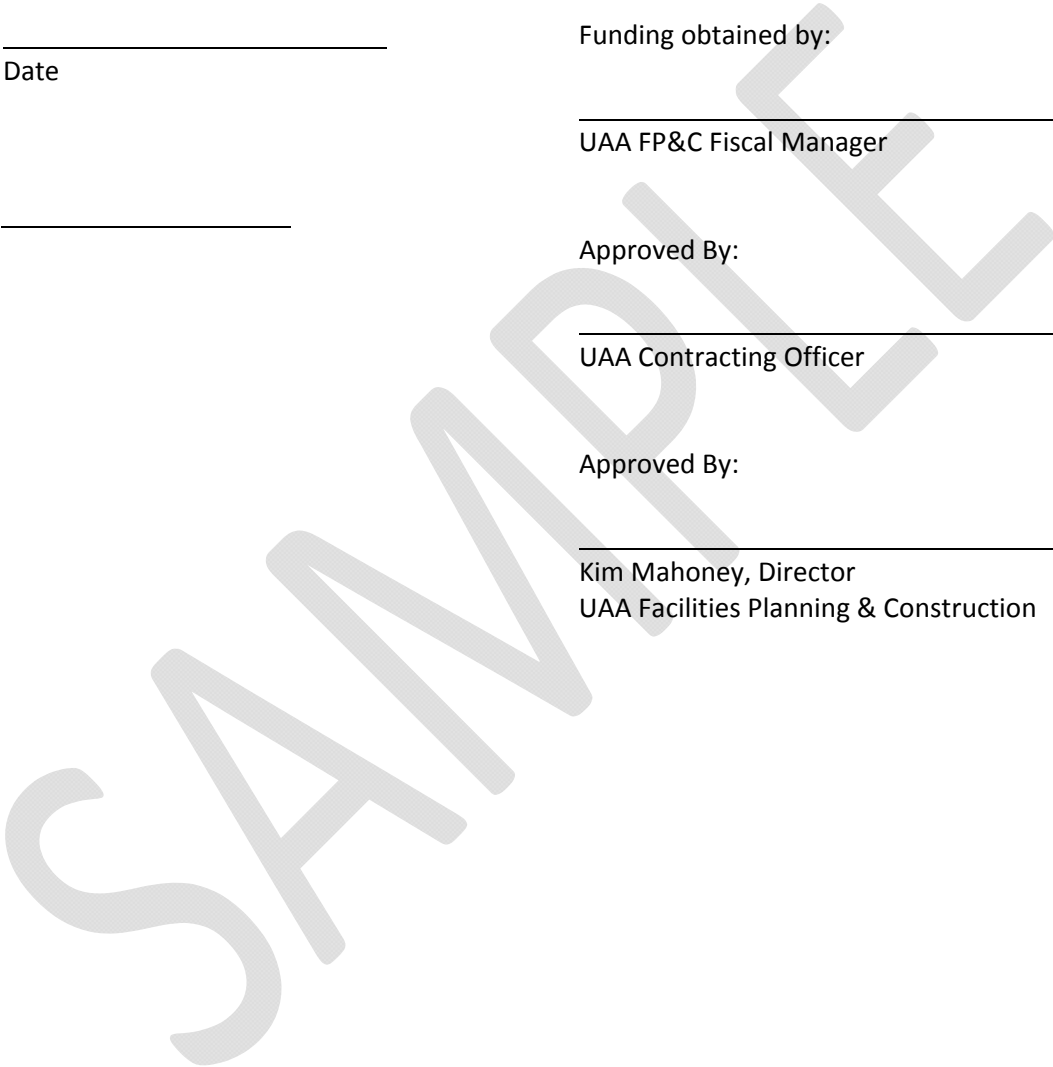
\_\_\_\_\_  
Date

Funding obtained by:  
\_\_\_\_\_  
UAA FP&C Fiscal Manager      Date

Tax ID: \_\_\_\_\_

Approved By:  
\_\_\_\_\_  
UAA Contracting Officer      Date

Approved By:  
\_\_\_\_\_  
Kim Mahoney, Director      Date  
UAA Facilities Planning & Construction





**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS** that we (1) \_\_\_\_\_ a (2)  
hereinafter called "Principal" and (3) \_\_\_\_\_  
of \_\_\_\_\_, State of \_\_\_\_\_ hereinafter  
called the "Surety", are held and firmly bound onto (4) \_\_\_\_\_  
of \_\_\_\_\_, hereinafter called "Owner", in the 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 Principal entered into a certain  
contract with the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_, 2017, a copy of which is hereto  
attached and made a part hereof for the construction of:

---

---

---

---

NOW THEREFORE, if the Principal shall well, 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 he 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 there under or the specifications accompanying the same shall in any way 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 Contractor shall  
abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

**IN WITNESS WHEREOF**, this instrument is executed in two (2) counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 2017.

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal) Secretary

By \_\_\_\_\_ (5)

SEAL

\_\_\_\_\_  
Address

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
Address

\_\_\_\_\_  
Surety

ATTEST:

\_\_\_\_\_  
(Surety) Secretary

By \_\_\_\_\_  
Attorney-in Fact

(SEAL)

\_\_\_\_\_  
Witness as to Surety

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

NOTE: Date of Bond must not be prior to date of Contract

- (1) Correct name of Contractor
- (2) A Corporation, a Partnership, or an Individual, as case may be
- (3) Correct name of Surety
- (4) Correct name of Owner
- (5) If Contractor is Partnership, all partners should execute bond

## PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we (1) \_\_\_\_\_ a (2) \_\_\_\_\_ and hereinafter called "Principal" and (3) \_\_\_\_\_ of \_\_\_\_\_, State of \_\_\_\_\_ hereinafter called "Surety" are held and firmly bound on to (4) \_\_\_\_\_, hereinafter called "Owner", in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, as 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 Principal entered into a certain contract with the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_, 2017, a copy of which is hereto attached and made a part hereof for the construction of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 authorization 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 way 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 Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in two (2) counterparts, each one of which shall be deemed an original, this the \_\_\_\_ day of \_\_\_\_\_, 2017.

**ATTEST:**

_____	_____
(Principal) Secretary	Principal
(SEAL)	By _____(5)
_____	_____
Witness as to Principal	(Address)
_____	_____
(Address)	Surety

**ATTEST:**

_____	_____
(Surety) Secretary	Attorney-in Fact
(SEAL)	_____
_____	Address
Witness as to Surety	
_____	
Address	

NOTE: Date of Bond must not be prior to date of Contract.

- (1) correct name of Contractor
- (2) a Corporation, a Partnership, or an Individual, as case may be
- (3) correct name of Surety
- (4) correct name of Owner
- (5) if Contractor is Partnership, all partners should execute bond

# Alaska Product Preference Program

<http://commerce.alaska.gov/dnn/ded/dev/AlaskaProductPreferenceProgram.aspx>



INSTRUCTIONS FOR ALASKA PRODUCTS PREFERENCE WORKSHEET

Special Notice: All procurement, except those funded from Federal sources, shall contain Contract provisions for the preference of Alaska products. The products listed by the Bidder on this worksheet have been selected for the reference project from the "Alaska Products Preference List" which was in force 30 days prior to the advertisement date of this contract. Bidders may obtain a copy of the appropriate listing "Alaska Preference List" by contacting their local DCED office or writing: Dept. of Commerce & Economic Development, Alaska Products Preference Listing, P.O. Box D, Juneau, Alaska 99811.

BIDDERS INSTRUCTIONS:

- A. GENERAL: The contracting Agency may request documentation to support entries made on this form. False presentations may be subject to AS 36.30.687. All Bidders' entries must conform to the requirements covering bid preparations in general. Discrepancies in price extensions shall be resolved by multiplying the declared total value times the preference percentage and adjusting any resulting computation(s) accordingly.
- B. BASE BID (form completion)
- 1) Enter project name and number and bid number, the words "Base Bid" and the Contractor's name in the heading of each page as provided.
  - 2) The Bidder shall compare those candidate products appearing on the preference listing (see Special Notice comments above) against the requirements of the technical specifications appearing in the contract documents. If the Bidder determines that a candidate product can suitably meet the contract requirements, then that product may be included in the worksheet as follows:
  - 3) For each suitable product submitted under the "Base Bid" enter:
    - the product name, generic description and its corresponding technical specification section number under the heading "PRODUCT & SPECIFICATION REFERENCE",
    - the company name of the Alaska producer under the heading "MANUFACTURER", and
    - the product class (I, II, or III) and preference percentage (3, 5, or 7% respectively) under the Product Class (%).
  - 4) For each product appearing on the list and to be utilized by the CONTRACTOR enter:
    - under the heading "ESTIMATED QUANTITY". The bidders estimated quantity of the product
    - under the heading "UNIT PRICE", the manufacturer's quoted unit price of the products under the heading "TOTAL DECLARED VALUE" the extension of "Estimated Quantity" times the manufacturer's quoted "Unit Price",
    - (caution: this value is to be the manufacturer's quoted price at the place of origin and shall not include costs for freight, handling or miscellaneous charge of incorporating the product into the work,) and
    - the resulting preference - i.e. the preference percentage times the total declared value amount - under the heading "APPLIED PREFERENCE".
  - 5) Continue for all "suitable" base bid products. If the listing exceeds one page enter the words "SUB" in front of the work "TOTAL" and on the first entry line of the following pages enter "SUBTOTAL OF APPLIED PREFERENCE FROM PREVIOUS PAGE".
  - 6) On the final page of the listing enter "BASE BID PREFERENCE GRAND" immediately before the word "TOTAL".
  - 7) Total the entries in the "APPLIED PREFERENCE" column for each page by commencing at the first entry for that page. If a continuation page exists, ensure that the subtotal from the previous page is computed into the running total. Number pages as appropriate.
  - 8) Compute a Grand Total for the Base Bid Preference. Enter this amount on the final page of the worksheet. (Note: On formally bid contracts this amount should also be entered on the Bid Form. Submit worksheet(s) with the Bid.
- C. ALTERNATE BIDS (form completion)
- 1) Enter project name and number and bid number, the words "Alternate Bid #\_\_\_", and the Contractor's name in the heading of each page as provided.
  - 2) On the first entry line enter "ADDITIONAL ALASKA PRODUCTS FOR ALTERNATE BID #\_\_\_", and repeat procedures 2 through 5 under part B these Bidder's instruction except that references to "Base Bid" shall be replaced with the words "Alternate Bid #\_\_\_."
  - 3) Following the listing of all additional Alaska products enter the words "ADDITIONAL PRODUCTS PREFERENCE FOR ALTERNATE BID #\_\_\_ - SUBTOTAL" and enter a subtotal amount for all additional products as listed. Subtotal amount to be determined by adding all additional product entries in the "APPLIED PREFERENCE" column.
  - 4) Skip three lines and enter "LESS THE FOLLOWING NON-APPLICABLE ALASKA PRODUCTS".
  - 5) Beginning on the next line, enter the product name and manufacturer of each Alaska Product appearing on the "Base Bid" listing which would be deleted or reduced from the Project should the "Alternate Bid" be selected. Details of entry need only be sufficient to clearly reference the subject product. (i.e. "Prehung doors by Alaska Door Co., " in lieu of "Prehung Solid Core Wood Door, model "Super Door", Section 08210, by Alaska Door Co., Anchorage") Products being reduced shall specify the amount of the reduction. Should no products require deletion enter "None". When a product is listed as a "NONAPPLICABLE ALASKA PRODUCT" for this alternate bid and if under the basic bid the Bidder received a preference on this basic bid as a result of that product, then the applicable entries under the heading "TOTAL DECLARED VALUE" and "APPLIED PREFERENCE" (for each product and from the base bid listing) shall also be entered into the corresponding heading of this form. Where only a portion of the products has been deleted, the entry (which will differ from those on the base bid listing) may be "pro-rated" or as otherwise substantiated.
  - 6) Following the listing of all non-applicable Alaska products enter the words "NON APPLICABLE PRODUCTS PREFERENCE FROM BASE BID --SUBTOTAL" and enter a subtotal amount for all non-applicable products as listed. Subtotal amount to be determined by adding all non-applicable entries in the "APPLIED PREFERENCE" column.
  - 7) At the bottom of the final page enter the words "ALTERNATE BID" # \_\_\_ PREFERENCE GRAND" immediately before the work "TOTAL".
  - 8) Compute a grand total for the alternate bid preference (for alternate #\_\_\_) by subtracting the non-applicable product preference subtotal from the additional product preference subtotal. Enter on the final page. (Note: On formally bid contracts this amount should also be entered on the alternate bid form. Submit separate worksheet(s) with each alternate bid.

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### UAA Forms List

1. Alternate Brand Request (2 pages)
2. Certificate of Insurance
3. Certificate of Substantial Completion
4. Consent of Surety to Final Payment
5. Contract Price Breakdown & Commencement & Completion Dates
6. Request for Information (RFI)
7. Notice of Warranty Deficiency
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16. Waiver of Lien Rights and Indemnification ( General Contractor)
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18. O & M Data Sheet
19. W-9

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## ALTERNATE BRAND REQUEST FOR CONSIDERATION

Facilities Planning and Construction  
3890 University Lake Drive, Suite 110  
Anchorage, Alaska 99058-4669

University of Alaska Anchorage  
Instructions to Bidders Article 4  
General Condition Article 16

From: \_\_\_\_\_ Date: \_\_\_\_\_

Project: \_\_\_\_\_

We hereby submit for your consideration the following alternate brand product on the above project:

Section	Paragraph	Drawing No.	Specified Item

1. Proposed alternate brand: \_\_\_\_\_

2. Describe briefly the reason for the proposed alternate brand: \_\_\_\_\_  
\_\_\_\_\_

3. Attach complete technical data, including laboratory test, if applicable. Include complete information on changes to contract documents which proposed alternate brand requires for its proper installation. Submit with request all necessary samples and substantiating data to show equal quality and performance to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance. See Instruction To Bidders Article 4 and General Conditions Article 16 for additional information.

4. Fill in the blanks below:  
a. Does the alternate brand cause changes to the drawings? \_\_\_\_\_

If "yes", clearly indicate changes: \_\_\_\_\_  
\_\_\_\_\_

b. Will the undersigned pay for changes to the drawings, including engineering and detailing costs caused by the requested alternate brand?  
\_\_\_\_\_

(Answer "yes" or "no".)

c. What effect does the alternate brand have on other trades? \_\_\_\_\_  
\_\_\_\_\_

d. Differences between proposed alternate brand and specified item? \_\_\_\_\_  
\_\_\_\_\_

5. Manufacturer's guarantees of the proposed item(s) are attached:  
  
Explain the differences between guarantees of the proposed and specified item(s).  
\_\_\_\_\_  
\_\_\_\_\_

## ALTERNATE BRAND REQUEST FOR CONSIDERATION

6. Discuss how the function, appearance, and quality of the proposed alternate brand compares with the specified item.

---

I hereby certify that the foregoing statements are true and correct to the best of my knowledge:

---

Signature	Title	Date
-----------	-------	------

---

Firm or Company Name	Address	Telephone Number
----------------------	---------	------------------

Signature must be by person having authority to legally bind his firm to the above terms, 1 through 6, including attachments. Failure to provide legally binding signature will result in retraction of acceptance.

---

### For Use by Design Consultant

Accepted \_\_\_\_\_ Not Accepted \_\_\_\_\_ Accepted as Noted \_\_\_\_\_

Remarks:

---

---

Signature \_\_\_\_\_ Date \_\_\_\_\_

---

### University of Alaska Anchorage

Received Too Late \_\_\_\_\_ Accepted \_\_\_\_\_ Not Accepted \_\_\_\_\_

Project Manager's Signature \_\_\_\_\_ Date \_\_\_\_\_

---

**END OF DOCUMENT**

**CERTIFICATE OF INSURANCE FOR ALL COVERAGES  
 UNIVERSITY OF ALASKA  
 FACILITIES PLANNING & CONSTRUCTION**

Northern Region 910Yukon Drive, Fairbanks, AK 99775	South Central Region 3890 University Lake Drive, Suite 110, Anchorage, AK 99508	Southeast Region PO Box 210049, Auke Bay, Alaska 99821
--	--	---

This is to certify that the policies listed in this certificate have been issued to the named insured by the insurer for the policy term and with the provisions designated herein and in compliance with the insurance and indemnification requirements of the contract.

Name of Address of the Insured	Name and Address of Agent:
Name and Address of Companies Affording Coverage Company Letter A	This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend, or alter the coverage afforded by the policies below, except as noted below.
Company Letter B	
Company Letter C	
Company Letter D	

Company Letter	Type of Insurance	Policy Number	Policy Expiration Date	All Limits in Thousands	
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> Commercial General <input type="checkbox"/> Premises – Operation <input type="checkbox"/> XCU <input type="checkbox"/> Broad From Property Damage <input type="checkbox"/> Contractual Liability <input type="checkbox"/> Occurrence or <input type="checkbox"/> Claim Made <input type="checkbox"/> Products/Completed Operations <input type="checkbox"/> Owner's/Contract's Protective Liability			General Aggregate Products-Comp/OpsAggregate Personal & Advertising Injury Each Occurrence Fire Damage (any one fire) Medical Expense (any one person)	\$ _____ \$ _____ \$ _____ \$ _____ \$ _____
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> Owned <input type="checkbox"/> Hired <input type="checkbox"/> Non-owned			CSL Bodily Injury (per person) Bodily Injury (per accident) Property Damage	
	<b>EXCESS LIABILITY</b> <input type="checkbox"/> Umbrella Form <input type="checkbox"/> Other Than Umbrella Form			Bodily Injury & Property Damages Combined	
	<b>WORKER'S COMPENSATION                      AND EMPLOYER'S LIABILITY</b> <input type="checkbox"/> All States Coverage			<u>Statutory</u> \$ _____ (each accident) \$ _____ (disease-policy limit) \$ _____ (disease-each employee)	
	<b>PROFESSIONAL LIABILITY</b> (If Applicable)  <input type="checkbox"/> 3 years Extension of Coverage				
	<b>OTHER</b> <input type="checkbox"/> ARBR with Flood & Earthquake				

ADDITIONAL INSURED: The University of Alaska is an additional insured on all policies; except Professional Liability and Worker's Compensation. WAIVER OF SUBROGATION is granted for University of Alaska as respects General Liability, Auto Liability, and Worker's Compensation. All policies are in effect at this time and will not be cancelled, until after 30 days written notice has been given to the certificate holder named above, addressed to the appropriate region, to the attention of the Director, Facilities Project Services.

\_\_\_\_\_  
 Signed Authorized Representative

\_\_\_\_\_  
 Date

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### CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Name: \_\_\_\_\_ Contract Authorization No: \_\_\_\_\_

Contractor: \_\_\_\_\_ Contract Date: \_\_\_\_\_

Date of Issuance: \_\_\_\_\_

Owner: UNIVERSITY OF ALASKA  
FACILITIES PLANNING AND CONSTRUCTION  
3890 University Lake Drive, Suite 110  
Anchorage, AK 99508-4669

Project Shall Include:

\_\_\_\_\_

The work performed under this contract has been reviewed and found to be substantially complete. The date of Substantial Completion is hereby established as \_\_\_\_\_

#### DEFINITION OF DATE OF SUBSTANTIAL COMPLETION:

The date of substantial completion of the project is the date certified by the owner when the work is substantially complete, in accordance with, and defined in the contract documents.

A list of items to be completed or corrected, prepared by the owner and verified and amended by the architect is appended hereto. The failure to include any items or such list does not alter the responsibility of the contractor to complete the project in accordance with the contract documents.

Architect: \_\_\_\_\_ By: \_\_\_\_\_ Date: \_\_\_\_\_

The contractor will complete or correct the work on the list of items appended hereto within 30 days from the date of substantial completion.

Contractor: \_\_\_\_\_ By: \_\_\_\_\_ Date: \_\_\_\_\_

The responsibilities of the owner and the contractor for maintenance, heat, utilities, and insurance shall be as follows:

\_\_\_\_\_

In reliance upon the certification of the contractor and the architect, the owner hereby accepts the project as substantially complete. In accordance with the contract documents, the owner hereby elects,  NOT TO;  TO; assume occupancy at \_\_\_\_\_ PM (time) on \_\_\_\_\_ (date).

Owner: **UNIVERSITY OF ALASKA** By: \_\_\_\_\_ Date: \_\_\_\_\_

cc: Contractor's GGL & Property Insurance Carrier (no attachment)  
Vice Chancellor of Administration (with attachment)  
Director, Risk Management (no attachment)

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**CONSENT OF SURETY COMPANY TO FINAL PAYMENT**

---

Project: \_\_\_\_\_ No.: \_\_\_\_\_

TO: \_\_\_\_\_ Contract Date: \_\_\_\_\_

OWNER:  
University of Alaska  
Facilities Planning and Construction  
3890 University Lake Drive, Suite 110  
Anchorage, AK 99508-4669

CONTRACTOR:

---

In accordance with the provision of the Contract between Owner and the Contractor as indicated above,  
the

\_\_\_\_\_  
Surety Company

on bond of Contractor

HEREBY APPROVES OF THE FINAL PAYMENT to the Contractor, and agrees that final payment to  
the Contractor shall not relieve the Surety Company of any of its obligations to

UNIVERSITY OF ALASKA, OWNER

as set forth in the said Surety Company's bond. Surety expressly agrees that any and all valid claims of  
subcontractors and all persons supplying labor or materials to the project will be satisfied by Contractor or  
Surety in a timely manner.

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand this \_\_\_\_\_ day of  
\_\_\_\_\_, year \_\_\_\_\_.

\_\_\_\_\_  
Surety Company

Attest: \_\_\_\_\_

\_\_\_\_\_  
Signature of Authorized Representative

Title: \_\_\_\_\_

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<b>REQUEST FOR INFORMATION/CLARIFICATION</b>	
--	--

Project:

Discipline:

- |  |  |
|--|--|
| <input type="checkbox"/> Civil         | <input type="checkbox"/> Mechanical - HVAC     |
| <input type="checkbox"/> Landscape     | <input type="checkbox"/> Mechanical - Plumbing |
| <input type="checkbox"/> Structural    | <input type="checkbox"/> Electrical            |
| <input type="checkbox"/> Architectural | <input type="checkbox"/> Fire Protection       |
|  | <input type="checkbox"/> Laboratory            |

References:

Drawings:
Specifications:
Attachments:
May have schedule or cost impact <input type="checkbox"/>

Subject:

--

**Requested By:**

Date:

Sub/Supplier (name/company/phone):	Sub/Supplier RFI #:

**Owner Response.**

--

Signature: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

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UNIVERSITY OF ALASKA

**NOTICE OF WARRANTY DEFICIENCY**

NO. \_\_\_\_\_

A. TO: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FROM: Director, Facilities Planning & Construction  
University of Alaska  
3890 University Lake Drive, Suite 110  
Anchorage, AK 99508-4669

DATE: \_\_\_\_\_

RE: \_\_\_\_\_

The deficiency described under Section B below (is) (is not) subject to remedy under \_\_\_\_\_  
\_\_\_\_\_ of the construction contract dated \_\_\_\_\_.

Please take immediate action to restore the deficient item to specification status. Return both copies of this notice with Section C completed as acknowledgement. Upon acceptance of the work performed, one copy will be returned to you.

By \_\_\_\_\_

\*\*\*\*\*

**DEFICIENCY REPORT**

B. LOCATION \_\_\_\_\_

Building \_\_\_\_\_ Floor \_\_\_\_\_ Room \_\_\_\_\_

EQUIPMENT \_\_\_\_\_ Description \_\_\_\_\_ Serial No. \_\_\_\_\_ Univ. No. \_\_\_\_\_

OTHER \_\_\_\_\_

DATE IF ACCEPTANCE \_\_\_\_\_

NATURE OF DEFICIENCY \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reported by \_\_\_\_\_ Date \_\_\_\_\_

\*\*\*\*\*

**STATEMENT OF CORRECTIVE ACTION**

C. Notice Received By \_\_\_\_\_ Date \_\_\_\_\_

Deficiency Corrected \_\_\_\_\_

Other Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signed \_\_\_\_\_  
For the Contractor \_\_\_\_\_ Date \_\_\_\_\_

Accepted \_\_\_\_\_  
For the University \_\_\_\_\_ Date \_\_\_\_\_

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2. Change Orders (list every executed Change Order issued to date of this request, even if no work has been completed to date.)						
No.	Date	Description	Additions to Contract Price			Deductions from Contract Price (enter as negative)
			Total	Completed to Date		
				%	Amount	
<b>TOTALS:</b>			(D)		(E)	(F)

Do not make entry or change formulas in shaded cells.

**3. Analysis of Adjusted Contract Amount to Date**

- a. Original contract amount (Total A)
- b. Plus: Additions scheduled (Total D)
- c. Less: Deductions scheduled (Total F)
- d. Adjusted contract amount to date (3a + 3b + 3c)

**4. Analysis of Work Performed**

- a. Cost of original contract work performed to date (Total B)
- b. Extra work performed to date (Total (E) + Total (F))
- c. Cost of work performed to date (4a + 4b)
- d. Less: Value of Owner-furnished materials [ Page 1, Item(s) No. \_\_\_\_\_ ]
- e. Add: Materials stored at close of this period (Attach detailed schedule)
- f. Total cost of work performed to date (4c - 4d + 4e)
- g. Less: Amount retained in accordance with contract terms (enter %) →
- h. Net amount earned on contract work to date (4f - 4g)
- i. Less: Amount of previous payments
- j. **BALANCE DUE THIS PAYMENT** (4h - 4i)

**5. Certification of Contractor**

According to the best of my knowledge and belief, I certify that all items and amounts shown on the face of this Periodic Estimate for Partial Payment are correct; that all work has been performed and/or material supplied in full accordance with the requirements of the referenced Contract, and/or duly authorized deviations, substitutions, alterations, and/or additions; that the foregoing is a true and correct statement of the Contract account up to and including the last day of the period covered by this Periodic Estimate; that no part of the "Balance Due This Payment" has been received, and that the undersigned and his/her subcontractors have - (check applicable line):

- a.  Complied with all of the labor provisions of said contract.
- b.  Complied with all of the labor provisions of said Contract except in those instances where an honest dispute exists with respect to said labor provisions. (If b. is checked, describe briefly the nature of the dispute.)

\_\_\_\_\_  
 Contractor  
 \_\_\_\_\_  
 Date

\_\_\_\_\_  
 Signature of Authorized Representative  
 \_\_\_\_\_  
 Title

**6. Certification of Architect or Engineer - UAA Project Manager to Initial Selection Required \_\_\_\_\_ Not Required \_\_\_\_\_**

I certify that I have checked and verified the above and foregoing Periodic Estimate for Partial Payment; that to the best of my knowledge and belief it is a true and correct statement of work performed and/or material supplied by the Contractor; that all work and/or material included in this Periodic Estimate has been inspected by me and/or by my duly authorized representative or assistants and that it has been performed and/or supplied in full accordance with requirements of the referenced Contract, and that partial payment claimed and requested by the Contractor is computed correctly on the basis of work performed and/or material supplied to date.

\_\_\_\_\_  
 Signature of Architect or Engineer

\_\_\_\_\_  
 Title



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**Facilities Planning  
& Construction**  
UNIVERSITY of ALASKA ANCHORAGE

**CONTRACT MODIFICATION PROPOSAL & ACCEPTANCE**  
3890 University Lake Drive, Suite 110, Anchorage, AK 99508  
907.786.4900 (v) - 907.786.4901 (f)

1. ISSUING AUTHORITY University of Alaska	2. PROJECT NO. XX-XXXX	3. MODIFICATION NO.: 01 PURCHASE ORDER NO.: ACTIVITY CODE:
4. TO: <Contractor Name> <Address>	5. PROJECT DESCRIPTION AND LOCATION: <Project Title> , Alaska	

6. A proposal is requested for making the hereinafter described change in accordance with specification and drawing revisions cited herein or listed in attachment hereto. Submit your proposal in space indicated on Page 2, including detail breakdown of prime and subcontract costs (see General Conditions, Article 46, Price Adjustments). DO NOT start work under this proposed change until you receive a copy signed by the University of Alaska or a directive to proceed.

Date	XXXXXXX, Project Manager Name and Title	Signature
------	--	-----------

7. **DESCRIPTION OF CHANGE:** Pursuant to the article of this contract entitled "changes" the Contractor shall furnish all plant, labor and material, and perform all work necessary to accomplish the following described work:

**See Page 2 for Description of Change**

For the above change, the sum of **\$00,000.00** is hereby **ADDED OR DEDUCTED** to the total contract price. **The Contract Completion date, as a result of this modification, remains unchanged or will change to 12/31/2016.**

The Contractor hereby accepts the foregoing adjustment as a final and complete equitable adjustment in full accord and satisfaction of all past, present, and future liability originating under any article in the Contract by reason of the facts and circumstances giving rise to this Modification.

Except as hereby modified, all terms and conditions of said Contract as heretofore modified remain unchanged and in full force and effect.

<p><b>THE FOREGOING MODIFICATION(S) IS HEREBY ACCEPTED.</b></p> <p>CONTRACTOR: &lt;Contractor Name&gt;</p>    <p>Signed by: &lt;Name &amp; Title&gt;                      Date</p>	<p>All Required BOR Approvals Obtained</p>
	<p>xxxxxxxxxxxxx, Project Manager                      Date Funding Obtained By</p>
	<p>FP&amp;C Fiscal Manager                      Date <b>APPROVED BY</b></p>
	<p>UAA Contracting Officer                      Date</p>
	<p>John Faunce, Director, FP&amp;C                      Date</p>

<b>CONTRACT SUMMARY</b>		<b>CURRENT COMPLETION DATE:</b> <u>June 30, 2016</u>	
ORIGINAL CONTRACT SUM	\$ 0.00	PREVIOUS TOTAL	\$ 0.00
PREVIOUS ADDITIONS	\$ 0.00	THIS CHANGE (ADD)	\$ 0.00
PREVIOUS DEDUCTIONS	\$ 0.00	NEW CONTRACT TOTAL	\$ 0.00



**Facilities Planning  
& Construction**  
UNIVERSITY of ALASKA ANCHORAGE

CONTRACT MODIFICATION PROPOSAL & ACCEPTANCE

3890 University Lake Drive, Suite 110, Anchorage, AK 99508

Page 2

1. ISSUING AUTHORITY University of Alaska	2. CONTRACT XX-XXXX	3. MODIFICATION NO.: 01 PURCHASE ORDER NO.: 0 ACTIVITY CODE: 0
4. TO: <Contractor Name> <Address> 0	5. PROJECT LOCATION AND DESCRIPTION: <Project Title> , Alaska	

7. DESCRIPTION OF CHANGE: continued....

Sample

**RELEASE ON CONTRACT**  
**University of Alaska Anchorage**

WHEREAS, by the terms of a contract dated \_\_\_\_\_ entered into by the University of Alaska, and \_\_\_\_\_ for the construction of \_\_\_\_\_ it is provided that:

“Neither the final payment nor the remaining retained percentage shall become due until the Contractor shall provide the Owner (1) with a waiver and release of liens, on the forms provided by the Owner, executed by the Contractor...”

NOW THEREFORE, in consideration of the premises and the payment by the University of Alaska to the undersigned Contractor of the amounts due under the contract and any changes or modifications thereto, to wit, the sum of \_\_\_\_\_, the undersigned Contractor hereby releases and forever discharges the University of Alaska including its property, particularly that real property known as the \_\_\_\_\_ of the University of Alaska, of and from all manner of debts, dues and sum or sums of money, accounts, claims, and demands whatsoever, in Law and in equity, under or by virtue of said contract, and warrants good title to all material, supplies and equipment installed or incorporated in the project and all work delivered to the premises, together with all improvements and appurtenances constructed thereon by \_\_\_\_\_ to the University of Alaska free of any claims, liens or encumbrances and that neither the undersigned nor any person, firm or corporation furnishing material or labor for any work covered by this Contract has any right to a lien upon the premises nor improvement thereon.

IN WITNESS WHEREOF, the seal of the undersigned Contractor have been hereunto set this

\_\_\_\_\_ day of \_\_\_\_\_

year of \_\_\_\_\_, at \_\_\_\_\_.

By \_\_\_\_\_

\_\_\_\_\_ being first duly sworn, say that I am the agent for

\_\_\_\_\_ and executed the foregoing under authority of said company to do so; that I have read the same, know the contents thereof, and the matters set forth therein are as I truly believe.

By \_\_\_\_\_

Subscribed and sworn to from before me this \_\_\_\_\_ day of \_\_\_\_\_, year of \_\_\_\_\_, at

\_\_\_\_\_.

Notary Public in and for \_\_\_\_\_

My Commission Expires \_\_\_\_\_

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## SUBSTITUTION REQUEST (After Award)

Facilities Planning & Construction  
3890 University Lake Drive, Suite 110  
Anchorage, Alaska 99058-4669

University of Alaska Anchorage  
General Condition Article 16  
(907) 786-4900 (phone)  
(907) 786-4901 (fax)

---

From: \_\_\_\_\_ Date: \_\_\_\_\_

Project: \_\_\_\_\_

We hereby submit for your consideration the following product as a proposed substitution for the specified item on the referenced project. We understand that alternate brands, e.g. "or equal" products were to be submitted prior to bid and that this substitution request for award, if considered by the Owner, will be done so only to if it is deemed to be in its interest.

Submittal Item	Section	Paragraph	Specified Item
_____	_____	_____	_____

1. Proposed substitution: \_\_\_\_\_

2. Describe the reason for the proposed substitution: \_\_\_\_\_  
\_\_\_\_\_

3. Attach complete technical data, including laboratory test, if applicable. Include complete information on changes to contract documents which proposed substitution requires for its proper installation. Submit with request all necessary samples and substantiating data to verify equal quality and performance to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance. See Instruction To Bidders Article 4 and General Conditions Article 16 for additional information.

4. Fill in the blanks below:  
a. Does the substitution affect dimensions shown on the drawings? \_\_\_\_\_

If "yes", clearly indicate changes: \_\_\_\_\_  
\_\_\_\_\_

b. Will the undersigned pay for changes to the project, including design, engineering and detailing costs resulting from the requested substitution?

(Answer "yes" or "no".)

c. What effect does the alternate brand have on other trades? \_\_\_\_\_  
\_\_\_\_\_

d. Differences between proposed alternate brand and specified item? \_\_\_\_\_  
\_\_\_\_\_

## SUBSTITUTION REQUEST

5. Credit for proposed substitution, if any: \_\_\_\_\_  
a. Attach letter of explanation discussing quality and credit issues.

I hereby certify that the foregoing statements are true and correct to the best of my knowledge:

Signature	Title	Date
Firm or Company Name	Address	Telephone Number

Signature must be by person having authority to legally bind his firm to the above terms. Failure to provide legally binding signature will result in retraction of acceptance.

### For Use by Design Consultant

Objection \_\_\_\_\_ No Objection

Remarks:

---

---

Signature \_\_\_\_\_ Date \_\_\_\_\_

### University of Alaska Anchorage

Accepted \_\_\_\_\_ Not Accepted

Remarks:

---

---

Project Manager's Signature \_\_\_\_\_ Date \_\_\_\_\_

**END OF DOCUMENT**

### SUBMITTAL SUMMARY SHEET

University of Alaska Anchorage

Project Name: \_\_\_\_\_

Project No.: \_\_\_\_\_

Building Name: \_\_\_\_\_

Building Number: \_\_\_\_\_

1. Item No.: \_\_\_\_\_
2. Specification Section/Drawing No./Detail No.: \_\_\_\_\_
3. Name of Item/Drawing Equipment No.: \_\_\_\_\_
4. Manufacturer/Model No.: \_\_\_\_\_
5. Use/Location: \_\_\_\_\_
6. Supplier: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Subcontractor: \_\_\_\_\_  
\_\_\_\_\_
8. Provider(s) of warranty service: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. Proposed deviation from the contract documents:<sup>1</sup> \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
10. Other contractor comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONTRACTOR REVIEW:**

Contractor: \_\_\_\_\_

(Name)

Reviewed By: \_\_\_\_\_

(Signature)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

<sup>1</sup>Entry must be made; if "none," so note.

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**TRANSMITTAL OF SUBMITTALS**

DATE: \_\_\_\_\_

SUBMITTAL NO.: \_\_\_\_\_

To: \_\_\_\_\_

\_\_\_\_ This is a new submittal

\_\_\_\_ This is a re-submittal

Facilities Planning & Construction  
 3890 University Lake Drive, Suite 110  
 Anchorage, AK 99508-4669

From: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Item Number	Description of Item Submitted	Number of Copies	Contract Reference Document	
			Spec Paragraph	Drawing Sheet #

- \_\_\_\_ DISAPPROVED
- \_\_\_\_ APPROVED
- \_\_\_\_ APPROVED AS NOTED
- \_\_\_\_ RESUBMIT

Approved is for general design and arrangement only. Not checked for quality, dimension or fit.

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**University of Alaska Anchorage  
 Facilities Planning & Construction**

By: \_\_\_\_\_ Date: \_\_\_\_\_

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**UNIVERSITY OF ALASKA ANCHORAGE**  
**WAIVER OF LIEN RIGHTS AND INDEMNIFICATION**  
**GENERAL CONTRACTORS**

The undersigned hereby waives and releases any and all liens or lien rights which the undersigned may have against the University of Alaska or its property, particularly that real property known as the \_\_\_\_\_ of the University of Alaska as a result and for all labor, services, materials and good provided, furnished, performed, installed, given, or delivered to, or in relation to the construction of the project known as \_\_\_\_\_, and the undersigned hereby acknowledge receipt for payment in full thereof.

The undersigned further covenants that all labor, services, materials and good provided, furnished, performed, installed, given or delivered by or through the undersigned for said project have been paid in full. Should any one supplying labor, service materials, or goods through the undersigned for said project agrees to hold the University of Alaska harmless with regard thereto and to indemnify the University of Alaska for any expenses or inconvenience incurred by the University with respect thereto.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, year of \_\_\_\_\_ at

\_\_\_\_\_.

By \_\_\_\_\_

\_\_\_\_\_ being first duly sworn, say that I am the agent for

\_\_\_\_\_ and executed the foregoing under authority of said company to do so; that I have read the same, known the contents thereof, and the matters set forth therein are as I truly believe.

By \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, year of

\_\_\_\_\_, at \_\_\_\_\_

Notary Public in and for \_\_\_\_\_

My Commission Expires \_\_\_\_\_

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**UNIVERSITY OF ALASKA ANCHORAGE**  
**WAIVER OF LIEN RIGHTS AND INDEMNIFICATION**

**Subcontractors and Material Suppliers**

The undersigned hereby waives and releases any and all liens or lien rights which the undersigned may have against the University of Alaska or its property, particularly that real property known as the \_\_\_\_\_ of the University of Alaska as a result and for all labor, services, materials and good provided, furnished, performed, installed, given, or delivered to, or in relation to the construction of the project known as \_\_\_\_\_, and the undersigned hereby acknowledge receipt for payment in full thereof.

The undersigned further covenants that all labor, services, materials and good provided, furnished, performed, installed, given or delivered by or through the undersigned for said project have been paid in full. Should any one supplying labor, service materials, or goods through the undersigned for said project agrees to hold the University of Alaska harmless with regard thereto and to indemnify the University of Alaska for any expenses or inconvenience incurred by the University with respect thereto.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, year of \_\_\_\_\_ at

\_\_\_\_\_.

By \_\_\_\_\_

\_\_\_\_\_ being first duly sworn, say that I am the agent for

\_\_\_\_\_ and executed the foregoing under authority of said company to do so; that I have read the same, known the contents thereof, and the matters set forth therein are as I truly believe.

By \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_,

year of \_\_\_\_\_, at \_\_\_\_\_

Notary Public in and for \_\_\_\_\_

My Commission Expires \_\_\_\_\_

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 **Facilities Planning  
& Construction**  
UNIVERSITY of ALASKA ANCHORAGE  
**O & M DATA SHEET**

PROJECT: \_\_\_\_\_

Project No.: \_\_\_\_\_

Bid No.: \_\_\_\_\_

Building Name: \_\_\_\_\_

Building Number: \_\_\_\_\_

1. Item No.: \_\_\_\_\_
2. Specification Section/Drawing No./Detail No.: \_\_\_\_\_
3. Name of Item/Drawing Equipment No.: \_\_\_\_\_
4. Manufacturer/Model No.: \_\_\_\_\_
5. Use and Location:<sup>1</sup> \_\_\_\_\_
6. Size/Capacity: \_\_\_\_\_
7. Supplier: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. Source of Spare Parts: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. Provider(s) of warranty service: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
10. Subcontractor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. Other contractor comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

---

CONTRACTOR REVIEW: Contractor: \_\_\_\_\_

(Name)

Reviewed By: \_\_\_\_\_

(Signature)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

<sup>1</sup>This information must be provided for all items. Be as specific as possible.

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Form **W-9**  
(Rev. January 2011)  
Department of the Treasury  
Internal Revenue Service

## Request for Taxpayer Identification Number and Certification

**Give Form to the  
requester. Do not  
send to the IRS.**

<b>Print or type See Specific Instructions on page 2.</b>	Name (as shown on your income tax return)	
	Business name/disregarded entity name, if different from above	
	Check appropriate box for federal tax classification (required): <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate	
	<input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶	
	<input type="checkbox"/> Other (see instructions) ▶	
Address (number, street, and apt. or suite no.)		Requester's name and address (optional)
City, state, and ZIP code		
List account number(s) here (optional)		

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number										

**Note.** If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Employer identification number										

### Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.

<b>Sign Here</b>	Signature of U.S. person ▶	Date ▶
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### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

#### Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

**Note.** If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

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GENERAL & SPECIAL CONDITIONS

UAA PSB ROOF REPLACEMENT

PROJECT NO. 14-0040

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## GENERAL CONDITIONS

<u>CLAUSE</u>	<u>TITLE</u>
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## GENERAL CONDITIONS

### 1. Definitions

The following terms as used in this work are defined as follows:

- a. "Owner": The University of Alaska, its Board of Regents, the President of the University of Alaska, and its employees, officers and agents.
- b. "Substantial Completion" or "Substantially Complete": Work has progressed to the point where, in the opinion of the Owner and as evidenced by its Certificate of Substantial Completion, the Work is sufficiently complete in accordance with the Contract so that the Work can be utilized for all of the purposes for which it was intended. Irrespective of other Work, Substantial Completion cannot be obtained until architectural finishes, electrical, mechanical, and life-safety systems are in place, balanced, and tested for proper operation.
- c. "Beneficial Occupancy": Use by the Owner at Owner's option of all or any part of the premises where the Work is being done. The Work may or may not be Substantially Complete.
- d. "Chief Procurement Officer for Construction": The Chief Procurement Officer for the University of Alaska.
- e. "Contracting Officer": The Owner's representative/procurement officer responsible for administration of construction contracts.
- f. "Contract Documents": The Agreement and the documents referenced in the Agreement Between Owner and Contractor, including but not limited to the Project Manual consisting of the Instructions to Bidders, the Special Conditions, if any, the Special Instructions to Contractors, if any, these General Conditions, the Laborer's and Mechanics' Minimum Rates of Pay, the manufacturers' instructions with reference to approved materials, the Technical Specifications, and the Contract Drawings, and including the Notice-of-Intent-to-Award Contract Letter, and all addenda to all of the forgoing.
- g. "Contract or Project Manager": The person designated by the Contracting Officer as the Owner's representative for this contract, responsible for the day-to-day coordination between the Owner and the Contractor.
- h. "Contract": The Agreement between Owner and Contractor and the Contract Documents.
- i. "Architect or Engineer or A/E": The design consultant of the Owner. Any reference to architect, engineer, inspector, or A/E within this contract shall mean the Owner.
- j. "Contractor": The person, firm, or corporation contractually responsible to the Owner to provide the services called for by this contract. Such entity may also be referred to as Managing General Contractor, General Contractor, or Prime Contractor.
- k. "Subcontractor": A person, firm, or corporation that provides a portion of the responsibility of the Contractor in connection with this contract.
- l. "Project": The total finished product of which the Work required by the Contract may be all or part and which may include construction by other contractors.
- m. "Work": The construction and/or services required by the Contract, whether partially or totally complete, including all labor, materials, equipment, and services provided or to be provided by the Contractor under the Contract, together with the means as determined by the Contractor to achieve the finished product. The Work specifically includes all necessary clean-up activities set forth in Clause 21 hereof. The Work may constitute all or a part of the Project.
- n. "Furnish": Supply and deliver to the project including the cost to supply and deliver.
- o. "Install": Build into the Work, ready to use in a complete, finished, and operable system, including the cost to install.

- p. "Provide": Furnish and install for a complete, finished, and operable system.
- q. "Shop Drawings, Setting Drawings, Manufacturer's Printed Information and Submittal (collectively known as "Submittals")": The Contractor's information consisting of drawings, catalogs, illustrations, calculations, and other data delivered to the Owner for the purpose of assuring the Owner, prior to execution of that part of the Work, that in the Owner's sole discretion, the prescriptive element, component, subsystem, or service to be provided conforms with the Contract. The Contractor is responsible to the Owner for the accuracy and completeness of the Submittals.
- r. "Reasonable Cost": A cost is reasonable if, in its nature or amount, it does not exceed that which would be incurred by an ordinary prudent person in the conduct of competitive business.
- s. "Direct Cost": A direct cost is any cost that can be identified specifically with a particular final cost objective, i.e., with this Contract, or an item of extra Work, or change order under the Contract.
- t. "Indirect Cost": An indirect cost, collectively called overhead, is any cost not directly identified with a single, final cost objective, but identified with two or more final cost objectives or an intermediate cost objective.
- u. "Days": Calendar days unless otherwise noted.

## **2. Reference Standards**

- a. When standards of the Federal Government, the State, trade societies, or trade associations are referred to in the Contract Documents by specific date of issue, these shall be considered part of the Contract. When such references do not bear a date of issue, the current published edition, including supplements thereto at date of first invitation to bid, shall be considered as part of this Contract unless otherwise specified.
- b. Codes and Standards. The latest editions of the following codes and standards except as modified by 13 Alaska Administrative Code, Chapters 50 and 55 (13 AAC 50 & 55) shall be adhered to:

- All applicable Federal, State, and Local Codes
- International Building Code (ICBO)
- International Mechanical Code (ICBO)
- Uniform Plumbing Code
- National Electrical Code
- International Fire Code (ICBO)
- National Fire Codes, Vols. 1 through 16
- Alaska Fire Safety Code
- Alaska General Safety Code, Vols. I, II, III

Publications of the following industry institutes and associations shall be used as minimal standards where applicable and shall not be contravened without prior written approval from the Owner:

- American Iron and Steel Institute
- American Institute for Steel Construction
- American Society for Testing and Materials
- American Welding Society
- National Fire Protection Association
- Portland Cement Association
- National Board of Fire Underwriters
- National Electrical Manufacturers' Association
- Underwriters Laboratory Standards for Safety

## **3. Owner Authority**

As provided in the Contract or by subsequent written instructions, the Owner shall give all orders and directions contemplated under this Contract. The Owner may determine the amount, quality, acceptability, and fitness of the several kinds of work and materials that are to be paid for under this Contract.

#### **4. Time for Completion and Liquidated Damages**

By executing the Agreement, the Contractor represents that it has visited the site, familiarized itself with the local conditions under which the Work is to be performed, and correlated its observations with the requirements of the Contract Documents. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion of the Work to be done pursuant to this contract are ESSENTIAL CONDITIONS of this Contract; and it is further mutually understood and agreed that the Work embraced in this Contract shall be commenced on a date to be specified in the "Notice-of-Award".

The Contractor agrees that said Work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as shall insure full completion thereof within the time specified. It is expressly understood and agreed by and between the Contractor and the Owner that the time for completion of the Work described herein is a reasonable time for the completion of the same, taking into consideration the severe weather, severe shipping problems, and unusual industrial conditions affecting the project locally. If the Contractor shall neglect, fail, or refuse to complete the Work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as part of the consideration for awarding of this Contract, to pay the Owner the amount specified in the Contract, not as a penalty but as a liquidated damage for such breach of contract as herein set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated for completing the Work. Said liquidated damage amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain; said liquidated damage amount is agreed to be the amount of damages which the Owner would sustain and said amount may be retained from time to time by the Owner from current periodical payment estimates.

It is further agreed that time is of the essence of each and every portion of this Contract wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided that, the Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the Contractor is without fault; and the Contractor's reasons for the time extension are acceptable to the Owner. Provided further that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due:

- a. To any preference, priority, or allocation order duly issued by the United States Government.
- b. To unforeseeable cause beyond the control and without the fault or negligence of the Contractor including, but not restricted to, acts of God, acts of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.
- c. To delays of subcontractors occasioned by any of the clauses specified in Subsections a. and b. of this Clause.

And provided further that the Contractor shall, within ten (10) days from the beginning of such delay, notify the Owner in writing of the causes of the delay and the time it believes to have been necessitated by the delay. The Owner then shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

#### **5. Notice and Service Thereof**

Any notice to any Contractor from the Owner relative to any part of this Contract shall be in writing and considered delivered and the service thereof completed when said notice is deposited in the United States Mail, postage prepaid, to the said Contractor at his address as shown in the agreement or delivered in person to said Contractor or his authorized representative on the work.

#### **6. Land and Rights-of-Way**

Prior to the start of construction and except as required under Clause 14, the Owner shall obtain all lands and right-of-ways necessary for carrying out and completing the Work pursuant to this Contract.

**7. Asbestos**

The Work of this project has been reviewed to determine the presence of asbestos and/or asbestos containing material (ACM) and if present whether they pose an asbestos health hazard. This information, if appropriate, may be found in the Technical Specifications or on the drawings. However, owing to the nature of the Work, the presence of asbestos or ACM may not be discovered until the Contractor begins its Work. The Contractor should be alert to suspecting asbestos or ACM when unfamiliar materials or insulation are encountered in any demolition, rehabilitation or maintenance on the Project.

The Contract may identify asbestos or ACM and make its removal and disposal the responsibility of this Contractor or it may identify asbestos or ACM the Contractor is to avoid. If asbestos or ACM is disturbed or the Contractor suspects it has encountered such material it shall immediately stop work in the area, order all persons out and notify the Owner of the hazardous or suspected hazardous materials.

The Owner upon receipt of notification shall cause an investigation to be conducted and shall make such tests as are necessary to determine whether such material exists and if so whether the asbestos or ACM poses a health hazard. The Owner may ask the Contractor to revise its schedule or issue a change modifying the Work. An adjustment in the Contract shall be made for any additions or deletions to the Work. However, the Contractor shall not be entitled to any costs in addition to the Contract from any delay or subsequent extension of time from any act, omission or Work under this clause.

The Contractor shall provide the appropriate safeguards in order to avoid disturbing asbestos or ACM when warned and for the protection its employees. The Contractor shall be liable for all costs resulting from its negligence in fulfilling its responsibilities under this clause.

**8. Pre-Construction Conference**

Subsequent to Notice-of-Award and prior to beginning on-site Work, the Owner will convene a meeting of the parties to the Contract. The purpose of this meeting is to initiate personal contact among the parties' representatives and establish coordination procedures. Other items of interest may be raised at this meeting. The time of the meeting will be mutually agreed upon by the parties.

**9. Progress Meetings**

The Owner will conduct a job-site meeting a minimum of once each month unless otherwise stated in the Special Conditions. The Contractor and such subcontractors as the Contractor may require shall attend. The purpose of these meetings is to review the progress of the Work and arrive at solutions to such problems as may have been encountered.

**10. Assignments**

The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without the prior written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms, and corporations for the services rendered or materials supplied for the performance of the Work called for in this Contract.

**11. Contract Security**

- a. Within ten (10) days of the receipt of written Notice-of-Intent-To-Award, the Contractor shall furnish a Performance Bond on a form provided by the Owner in an amount at least equal to one hundred percent (100%) of the Contract sum as security for the faithful performance of this Contract and also a Payment Bond in an amount of one hundred percent (100%) of the Contract sum. Said surety shall be licensed to do business in the State of Alaska and shall be listed as a surety acceptable on federal bonds by the U.S. Department of the Treasury in Treasury Circular 570. Each bond must meet federal Miller Act requirements and must be approved by the Owner.



- b. If at any time the Owner for justifiable cause shall be or become dissatisfied with any surety or sureties then upon the Performance or Payment bonds or the surety fails to furnish reports on its financial condition as required by the Owner, the Contractor shall, at the Contractor's sole expense, within five (5) days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. No further periodic payments to Contractor shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.
- c. In addition, the Contractor shall promptly furnish additional security required to protect the Owner and persons supplying labor or materials under this Contract if the Contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer.

## **12. Indemnification**

To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the Owner from and against any and all loss, expense, damage, claim, demand, judgment, fine, charge, lien, liability, action, cause of action, or proceedings of any kind whatsoever (whether arising on account of damage to or loss of property, or personal injury, emotional distress, or death) arising directly or indirectly in connection with the performance of the Work, whether the same arises before or after completion of the Contractor's operations or expiration of this Agreement, except for damage, loss, or injury resulting from the Owner's sole negligence or intent to cause property damage or personal injury. The indemnification obligation set forth herein shall not be limited by compensation, damages, or benefits payable by or under the Alaska Workers' Compensation Acts or similar acts.

## **13. Insurance (Revised 9/06)**

- a. Without limiting its indemnification, it is agreed that the Contractor shall purchase at its own expense, and maintain in force at all times during the performance of services under this Contract, the insurance and endorsements required under this clause and shall present to the Owner proof of such insurance and endorsements prior to commencing work. The Contractor shall furnish Owner with a Certificate of Insurance with a copy of the declarations page and the required endorsements attached thereto showing the type, amount, effective dates, and dates of expiration of all policies. All endorsements shall reference the policy and this Contract. The "University of Alaska" is to be identified on all certificates and endorsements. The Contractor agrees, to the extent and in the manner required by the Owner, to submit for the approval of the Owner, copies of any insurance policies maintained by the contractor specified in connection with the performance of this contract. All insurance must be issued by companies admitted to do business in the State of Alaska and have a rating in A.M. Best of A-, Class VII or better. Failure to furnish satisfactory evidence of insurance, lapse of a policy, or inadequate limits, is a material breach and grounds for termination of this contract. Failure of Owner to demand such certificates or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

If Contractor fails to maintain the insurance as set forth herein, Owner shall have the right, but not the obligation, to purchase said insurance at Contractor's expense.

- b. Subcontractors:

The Contractor, following award, shall cause each Subcontractor or Sub-subcontractor, prior to commencing work on site, to provide the insurance required under this Contract with the exception of Builders Risk Insurance, and to submit proof of insurance to the Owner. All Subcontractors and Sub-subcontractors are required to add the Owner as an additional insured to all policies, with the exception of workers' compensation. All Subcontractors and Sub-subcontractors are to waive subrogation against the Owner on all policies. Limits for Subcontractors and Sub-subcontractors Commercial General Liability insurance shall be a minimum of \$1,000,000 (one million) per occurrence and \$2,000,000 (two million) aggregate, unless otherwise stated in the Special Conditions, notwithstanding paragraph 13.f.2.

c. Notice Period for Proof of Insurance, Change, Cancellation, or Non-Renewal:

Certificates of Insurance, on a form acceptable to the Owner, must be furnished to the Owner within ten (10) days of receipt of the Notice-of-Intent-to-Award. Contractor will endeavor to provide thirty (30) days prior written notice to the Owner if coverage is suspended, voided, cancelled by either party, reduced in coverage, reduced in limits below minimum required limits, or non-renewed.

d. Limits:

All insurance limits are minimum. If the Contractor's, Subcontractors', or Sub-subcontractors' policies contain higher limits, the Owner shall be entitled to coverage to the extent of such higher limits. Limits may be a combination of primary and excess (umbrella) policies. If, during any time that insurance is to remain in effect under this Contract, the minimum limits required by this contract are reduced by Claims or for any other reason, it will be the responsibility of the Contractor, Subcontractors, or Sub-subcontractors, at their own expense, to reinstate said limits to comply with the minimum requirements and shall furnish to Owner a new certificate of insurance showing such coverage is in force.

e. Insurance Required:

1. Workers' Compensation and Employers Liability Insurance: Contractor shall maintain workers' compensation and employer liability insurance as required by any applicable law or regulation. The commercial umbrella and/or employers liability limits shall not be less than \$500,000 each accident for bodily injury by accident and \$500,000 each employee for bodily injury by disease. The Contractor shall be responsible for Workers' Compensation Insurance for any subcontractor who directly or indirectly provides services under this contract. This coverage must include statutory coverage for states in which employees are engaging in work. If there is an exposure of injury to Contractor's employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act, or under laws, regulations, or statutes applicable to maritime employees, coverage shall be included for such injuries or Claims. Contractor waives all rights against the Owner for recovery of damages to the extent these damages are covered by the workers' compensation and employer's liability or commercial umbrella liability insurance obtained by Contractor pursuant to this Contract.
2. Commercial General Liability Insurance: The Contractor is required to provide Commercial General Liability (CGL) insurance with a limit not less than \$1,000,000 (one million dollars) each occurrence and \$2,000,000 (two million dollars) aggregate not excluding premises, operations, independent contractors, personal/advertising injury, products-completed operations, liability assumed under an insured contract (including defense costs and the tort liability of another assumed in a business contract). The Owner shall be included as an additional insured under the CGL and under the commercial umbrella, if any, to include coverage for Owner with respect to liability arising out of the completed operations of Contractor, and which, for projects greater than \$5,000,000 (five million), coverage shall be maintained in effect for the benefit of Owner for a period of two years following the completion of the work. Coverage is to apply on a primary basis in relation to the University's own insurance or self-insurance, which are to be non-contributing. The status of Owner as an insured under a CGL obtained in compliance with this contract shall not restrict coverage under such CGL with respect to the escape or release of pollutants at or from a site owned or occupied by or rented or loaned to Owner. There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from explosion, collapse, or underground property damage. The policy must provide cross-liability coverage as would be achieved under the standard ISO separation of insureds clause. Contractor waives all rights against Owner for recovery of damages to the extent these damages are covered by the CGL or umbrella liability insurance maintained pursuant to this Contract. Contractor will provide a waiver of subrogation under the CGL policy.

3. Business Auto Coverage: Contractor is required to maintain automobile liability insurance with a limit of not less than \$500,000 per occurrence bodily injury and property damage. Such insurance shall cover liability arising out of any auto (including owned, hired, and non-owned autos). Coverage shall be written on standard ISO forms from 1990 editions forward, or a substitute form providing equivalent liability coverage. If such coverage is not provided in the base policy, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in the 1990 and later editions of CA 00 01. Contractor waives all rights against the Owner for recovery of damages to the extent these damages are covered by the auto or commercial umbrella liability insurance obtained by Contractor pursuant to this Contract. The Owner shall be included as an additional insured. Contractor will provide a waiver of subrogation under the Business Auto policy.
4. Builders Risk: The Contractor shall purchase and maintain in force builders risk insurance on the entire work. Such insurance shall be written on a completed value form and in an amount equal to the initial contract sum, subject to subsequent modifications of the contract sum. The insurance shall apply on a replacement cost basis. The insurance shall name as additional insureds the Owner and all Subcontractors and Sub-subcontractors in the work. The insurance shall cover the entire work at the site including reasonable compensation for architects' services and expenses made necessary by an insured loss. Insured property shall include portions of the work located away from the site but intended for use at the site, portions of the work in transit, and shall include the value of any Owner-furnished materials. The policy shall cover the cost of removing debris, including demolition as may be made legally necessary by the operation of any law, ordinance, or regulation. The builders risk insurance shall be written to cover all risks of physical loss except those specifically excluded in the policy, and shall insure at least against the perils of fire and extended coverage, theft, vandalism, malicious mischief, and collapse. Quake and/or flood coverage may be required, per Special Conditions. Any deductible applicable to the insurance shall be identified in the contract documents and the responsibility for paying the part of any loss not covered because of the operation of such deductible shall be borne by the Contractor. The builders risk insurance shall be maintained in effect, unless otherwise provided for in the contract documents, until the earliest of the following dates:
  - a) The date on which all persons and organization who are insureds under the policy agree in writing that it is terminated;
  - b) the date on which final payment of this contract has been made;
  - c) the date on which the insurable interests in the property of all insureds other than Owner have ceased.

If Owner is damaged by the failure of Contractor to maintain insurance as required in this section, then Contractor shall bear all reasonable costs properly attributable to that failure. Owner and Contractor waive all rights against each other and each of the Subcontractors, Sub-subcontractors, officers, directors, agents, and employees, for recovery for damages caused by fire and other perils to the extent covered by builders risk insurance or any other property insurance applicable to the work. The policy shall specifically permit partial or beneficial occupancy at or prior to Substantial Completion or final acceptance of the entire Work.

#### **14. Permits, Regulations, and Surveys**

- a. The Contractor shall procure and pay for all permits, licenses, and approvals necessary for the execution of this contract and completion of the work pursuant hereto. The Contractor agrees to defend, indemnify, and hold harmless the Owner against liability, including all costs, for infringement upon any United States patent arising out of performing this Contract.

- b. Contractor shall adhere to all applicable federal, state, and local laws and regulations relating to the performance of the Work, the protection of adjacent property, and the erection or maintenance of passageways, guard fences, or other protective facilities. Contractor shall adhere to all University of Alaska BOR and SW Policies and Regulations to the extent they apply to the public generally, including, but not limited to, speed limits, prohibition of firearms on campus, and prohibitions on use of alcohol or drugs on university property.
- c. Except for the vertical and horizontal control shown on the Contract Documents as existing, no surveys or control stakes will be furnished by the Owner. All surveys required to locate the Work according to the Contract Documents shall be performed and paid by the General Contractor.

**15. Project Schedule, Contract Price, and Bid Breakdown**

Twenty-one (21) days prior to the date of submittal of the first periodic estimate for partial payment and in no event later than forty-five (45) days after receipt of the Notice-of-Award, whichever date occurs first, the Contractor shall deliver to the Owner for its review:

- a. Provide an itemized listing of the Work according to the various sections under each division, the value of each, and the proposed dates of commencement and completion of each. Within the time stated above, the Contractor shall submit two copies of a detailed arrow diagram which shall be of the customary activity-on-arrow type, describing the activities to be accomplished in the Project, their dependency relationships with the critical path generally plotted along the center of the network diagram, including two copies each of tabulated schedules, one showing the activities with the information below and one indicating the proposed estimated completed value of the Work at intervals coinciding with the monthly periodic payment request dates. The estimated monthly completed value of the Work shall be updated each month and submitted with the periodic payment request. Costs associated with on-site preparatory work (start-up or set-up costs) will be prorated over all Work activities. Separate payment for on-site preparatory costs will not be made by the Owner.
- b. Provide a practicable schedule using the subdivisions of Work listed for (a) above showing the order in which the Contractor proposes to carry on the Work, the date on which it will start the several salient features, and the contemplated dates for completing same. The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of the Work scheduled for completion at any time. If the Contractor fails to submit a construction schedule within the time herein prescribed or revise the schedule as herein provided, the Owner may withhold approval of the periodic payment. In addition to construction activities, the progress chart shall include the submittal and approval of materials and Submittals, the procurement of critical materials and equipment, adjusting or testing subsystems, fabrication of special materials and equipment and their installation and testing. All activities of the Owner that affect progress including Owner instructions, Record Drawings, and Contract dates for beginning and completion of all parts of the Work will be shown. The selection and number of total activities under a. and b. shall be subject to the Owner's approval. Even though the Owner may review and approve a schedule prepared by the Contractor, the Owner in no way warrants or opines that the schedule as approved is reasonable, nor does the Owner assume any responsibility whatsoever in connection with the Contractor's schedule. The Contractor is solely responsible for all aspects of the schedule.
- c. The value of the activities employed in the schedule will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to, or deductions from, the Contract sum. Neither shall Work represented in making up any schedule be construed as complete or acceptable when its respective value is paid in a periodic payment, nor shall payment constitute waiver of defects.
- d. A condensed tabulation of the activities summarizing the costs in the schedule under b. above shall be provided. The value of the activities in the summary network when approved shall constitute the bid breakdown and shall appear on the Owner's Periodic Estimate for Partial Payment Form. A tabulation shall also be presented showing the summary activities, and the proposed estimated completed value of the Work at intervals coinciding with the monthly periodic requests for partial payment for the entire term of the Contract.

- e. A monthly update of the information requested in paragraphs a. and b. above, beginning the second month after Notice-of-Award and continuing until acceptance of the Work. The monthly update shall be submitted with the Contractor's Periodic Estimate for Partial Payment, but in no event, later than the fifth of each month while the Work is in progress. The monthly update shall be revised to show Work complete and a revised order of completion of activities, if appropriate, through Project completion including any effect approved changes will have on the scheduling of the remainder of the Work. Failure to provide the monthly update will be cause to withhold partial payment.
- f. If, in the opinion of the Owner, the Contractor falls behind its most current schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Owner, without additional cost to the Owner. Failure of the Contractor to comply with the requirements of the Owner under this Clause shall be grounds for a determination by the Owner that the Contractor is not prosecuting the Work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the Owner may terminate the Contractor's right to proceed with the Work, or any separable part of it, in accordance with the default terms of this Contract.
- g. Although the Contractor is required herein to submit a schedule based upon a completion date as stated in this Contract and not sooner, the Contractor may submit a schedule for early completion provided the schedule is realistic and the Owners activities and milestones are met; however, the Contractor agrees, when electing an early completion schedule, that the Owner will not be liable for damages of any kind for whatever reason including delay if the Contractor is not able to meet its earlier completion date and that all it will be entitled to is additional time, if appropriate. Permission to present a schedule with an earlier completion date does not change the Contract completion date, or time, at award, except as amended by modification to the Contract.

#### **16. Alternate Brands/Substitutions**

- a. **ALTERNATE BRANDS:** Whenever a material, article, or piece of equipment or system is identified in the Contract Documents by reference to manufacturers' or vendors' names, trade names, catalog numbers, etc., it is intended to establish a minimum standard. Unless otherwise noted, alternate brands of any material, article, equipment, or system of other manufacturers or vendors that will perform adequately the duties imposed by the general design of the Project will be considered equally acceptable; provided the material, article, equipment, or system so proposed is, in the opinion of the Owner, of equal substance, function, dimension, appearance, and quality.

Alternate brands may be qualified if found to be equal or better, only by submitting a written request to the Owner for approval, on the form provided, a minimum of fourteen (14) days in advance of the bid opening, accompanied by description, catalog cuts, etc. and other information as may be required by the Owner for proper evaluation of the request. Any brand named product listed in the technical specification followed by the phrase "or equal" is understood to mean an alternate product that, if presented, must be prior to bid opening as provided herein. If in the opinion of the Owner, an alternate brand is determined to be of equal substance, function, dimension, appearance, and quality, an addendum shall be issued to all parties who have been furnished Contract Documents for bidding purposes.

- b. **SUBSTITUTIONS:** A substitution will only be considered after the bid opening when deemed by the Owner to be in its sole interest. In which case, the request shall be accompanied by a monetary proposal, full description, catalog cuts, drawings, prints, and/or test report, and such other information as may be required by the Owner on the form provided and as may be needed for proper evaluation of the request. Substitutions shall not be purchased or installed in the Project by the Contractor without the Owner's written approval.

- c. Any proposed substitution whose characteristics differ from the specified item to such an extent as to necessitate changes in the mechanical, electrical, or other basic design of the Project shall include the cost of any such changes, the design and cost of design, which costs shall be borne by the Contractor. Determination of a substitution request will be based on the Owner's comparisons as to quality, adaptability, aesthetics, contract amount change if applicable under Clause b. above, etc. between the proposed substitution and specified items.

## **17. Submittal Schedule**

Within thirty (30) days after receipt of written Notice-of-Award, the Contractor shall submit a schedule of proposed Submittals for the Owner's information. The schedule shall detail the specification section or location on plans, quantity, description, and estimated dates of each proposed Submittal and the latest date by which the Contractor must receive favorable Owner's review in order to meet the scheduled completion date. This schedule shall be coordinated with the Project schedule for completion. In no case shall the Contractor's Submittal schedule allow less than fourteen (14) days for Owner's review.

Partial Submittals shall be identified as such and shall be accompanied by a statement from the Contractor identifying the remaining material to be submitted.

## **18. Submittals**

- a. Shop Drawings, Product Data, and Samples
  1. Contractor shall submit Product Data and Shop Drawings to Owner for review in accordance with the accepted "Submittal Schedule and Shop Drawing Record". The data shown on the Submittals will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Owner the materials and equipment Contractor proposes to provide and to enable Owner to review the information for the limited purposes required by Paragraph 18.b.
  2. Contractor shall also submit Samples to Owner for review in accordance with said accepted Submittal Schedule and Shop Drawing Record. Each Sample will be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as Owner may require to enable Owner to review the Submittal for the limited purposes required by Clause 18.b.
- b. Review
  1. Owner's review will be only to determine if the items covered by the Submittals, after installation or incorporation in the Work, appear to conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Owner's review will not extend to means, methods, techniques, sequences or procedures of construction (except where a particular means, method, technique, sequence or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review of a separate item as such will not indicate approval of the assembly in which the item functions.
  2. Contractor shall make corrections required by Owner, and shall return the required number of corrected copies of Submittals, or new Samples, and resubmit for review. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Owner on previous Submittals.
- c. Contractor's Responsibility for Variation

Owner's review of Submittals or Samples will in no way relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has, in writing, specifically called Owner's attention to each such variation at the time of submission and Owner has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Submittal or Sample; nor will any review by Owner relieve Contractor from responsibility for complying with the requirements of Clause 16.b and 16.c.

d. Work Prior to Review of Submittal

Where a Submittal or Sample is required by the Contract Documents or the "Submittal Schedule and Shop Drawing Record" as accepted by Owner, any related Work performed prior to Owner's review of the pertinent Submittal will be at the sole responsibility of Contractor and any related Work that is not in accordance with the reviewed Submittal and Contract Documents shall be corrected at the Contractor's sole expense.

**19. Contractor's Obligations**

The Contractor shall, in a good workmanlike manner, do and perform all Work and furnish all supplies, materials, machinery, equipment, facilities, and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the Work required by this Contract within the time herein specified, in accordance with the provision of this Contract, the Contract Documents, and any and all supplemental plans and drawings, and in accordance with the directions of the Owner as given from time to time during the progress of the Work. All equipment, material, and articles incorporated into the Work covered by this Contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this Contract.

The Contractor shall furnish, erect, maintain, and remove such construction plant and temporary works as may be required. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the Contract and specifications, and shall do, carry on, and complete the entire Work to the satisfaction of the Owner.

**20. Superintendence by Contractor**

The requirement for competent, well-organized, on-site daily supervision by the Contractor is a necessity. For the term of this Contract, the Contractor shall appoint an on-site project superintendent with competence and experience in the work of this Project, who shall have full authority to act for and bind the Contractor. No later than thirty (30) days after receipt of the Notice-of-Award, the Contractor shall provide the Owner in writing the name and detailed experience record of the person it proposes as project superintendent. The Owner has seven (7) days to notify the Contractor if the proposed project superintendent is not acceptable to the Owner. The project superintendent shall be supported by competent assistants, as necessary. The project superintendent and assistant(s) must be acceptable to the Owner and shall continue in that capacity for the duration of the Work unless they cease to be employees of the Contractor. The project superintendent must be in place before the Contractor submits its first Periodic Estimate for Partial Payment.

**21. Use of Premises and Removal of Debris**

The Contractor expressly undertakes at Contractor's own expense:

- a. To take every precaution against injuries to persons or damage to property in connection with this Project.
- b. To store Contractor's apparatus, materials, supplies, and equipment in such orderly fashion at work site as will not unduly interfere with the progress of Contractor's Work or the work of any other contractor or subcontractor.
- c. To place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.
- d. To cleanup frequently and as often and in such manner as the Owner may direct all refuse, rubbish, scrap materials, and debris caused by the Contractor's operations to the end that at all times the Work site shall present a neat, orderly, and workmanlike appearance.
- e. Before final payment, to remove, and dispose of in an environmentally safe manner, all surplus material, false work, temporary structures, including foundations thereof, plant of any description, and debris of every nature resulting from the Contractor's operations and to put the job site in a neat, orderly condition including the cleaning of windows, exterior and interior surfaces with manufacturers recommended procedures after the installation of all materials, equipment and testing.

- f. To effect all cutting, fitting, or patching of the Contractor's Work required to make the same conform to the Project plans and specifications and, except with the prior written consent of the Owner, not to cut or otherwise alter the work of any other contractor or subcontractor.
- g. Trash and debris shall be disposed of off campus in accordance with state and municipal/borough statutes. Hazardous materials shall be prepared and disposed of in accordance with federal, state and municipal/borough laws and regulations.

## **22. Materials, Services, and Facilities**

The Contractor shall include in its lump-sum bid the cost to provide and pay for everything necessary to complete the Work including, but not limited to, design, supervision, labor, the cost of employing labor, materials, the delivery of materials, loading and unloading materials, the positioning of materials, removal of waste, packaging, equipment, machinery, power, water, heat, light, temporary construction of every nature whatsoever, escalation and price fluctuation, overhead and profit, and all other services all within the time specified to execute, complete, and deliver the work., unless otherwise noted in the Contract Documents.

Any work necessary to be performed beyond scheduled working hours established by the Contractor, for example on Sundays or legal holidays, shall be performed without additional expense to the Owner.

## **23. Inspection and Correction of the Work**

- a. The Owner and its authorized representatives shall be permitted to inspect all Work, material, payrolls, records of personnel, invoices of materials, and other relevant data and records of the Contractor or subcontractors relating to the Work. No representative of the Owner designated to inspect the Work is authorized to change any provision of the specification unless that authority is specifically stated in writing by the Owner, nor shall the presence or absence of such representative relieve the Contractor from any requirements of the contract.
- b. All work, all materials whether incorporated into the Work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Owner who shall be the final judge of the quality and suitability of the Work and materials for the purposes for which they are used. Should they fail to meet Owner's approval, they shall forthwith be reconstructed, made good, replaced, and/or corrected as the case may be by the Contractor at Contractor's sole expense. Rejected material shall immediately be removed from the work site at no cost to the Owner. If, in the opinion of the Owner, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the Work injured or not performed in accordance with the Contract, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Owner shall be equitable.
- c. The Owner will have authority to reject Work that, in its opinion, does not conform to the Contract. Whenever, in its reasonable opinion, it is considered necessary or advisable to insure the proper implementation of the intent of the Contract, Owner may require the Contractor to stop the Work or any portion thereof, or require special inspection or testing of the Work, whether or not such Work be then fabricated, installed, or completed.
- d. If any Work should be covered contrary to the specific request of the Owner, it shall, if requested by the Owner, be uncovered for its observation and replaced after such observation at the Contractor's sole expense.
- e. If any other Work has been covered which the Owner has not specifically requested to observe prior to it being covered, the Owner may request to see such Work; and it shall be uncovered by the Contractor. If such Work be found to be in accordance with the Contract, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract, the Contractor shall pay such costs. In the event that the Contractor determines the Owner's decision is contrary to the requirements of the Contract, it shall proceed according to Clause 44 of these General Conditions.



**24. Material Inspection and Testing**

- a. All materials and equipment used in the construction of the Project are subject to inspection and testing at the request of the Owner. The laboratory or inspection agency shall be selected by the Owner.
- b. All testing, unless otherwise specifically called for by the technical specifications, shall be paid for by the Owner, except that the Contractor shall reimburse the Owner for the cost of tests that show the failure of the item or items tested to comply with contract requirements.
- c. The Contractor shall reimburse the Owner for all costs incurred by the Owner resulting from the Contractor's failure to be ready for testing when required or scheduled.

**25. Weather Conditions and Natural Disasters**

The Contractor shall assume all risks for damage to the Work and materials from fire, earthquake, storm, flood, and/or other causes prior to the completion and acceptance of the Work and shall, at the Contractor's sole cost and expense, repair and/or replace any Work or materials so damaged or destroyed.

In the event of temporary suspension of Work, or during inclement weather, or whenever the Owner shall direct, the Contractor shall and shall cause its subcontractors to protect carefully all work and materials against damage or injury from the weather. If any Work or materials shall be damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors to so protect the Work, such Work and materials shall be removed and replaced at the expense of the Contractor.

**26. Protection of Property and Emergencies**

- a. The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the job site which are not to be removed and which do not unreasonably interfere with the Work required under this Contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Owner.
- b. The Contractor shall protect from damage all existing improvements and utilities (1) at or near the job site and (2) on adjacent property of a third party, the location of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this Contract or failure to exercise reasonable care in performing the Work. If the Contractor fails or refuses to repair the damage promptly, the Owner may have the necessary work performed and charge the cost to the Contractor.
- c. In the case of an emergency which is no fault of the Contractor or persons or parties whose acts or omissions are, or may be, chargeable under this Contract to the Contractor which threatens loss or injury of property and/or safety of life, the Contractor shall act, with or without previous instructions from the Owner, in a diligent manner. The Contractor shall notify the Owner immediately thereafter of the emergency and of any action taken. Any claim for compensation by the Contractor due to such extra Work shall be promptly submitted to the Owner for approval. The amount of compensation claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Clause 44 of the General Conditions. Contractor shall provide a continuous operating method of contact with appropriate emergency services (such as "911") that ensures a minimized notification period.

Where the Contractor has not taken action but has notified the Owner of an emergency threatening injury to property and/or life or damage to the Work or any adjoining property, it shall act as instructed or as authorized by the Owner.

**27. Mutual Responsibility of Contractors**

If through acts of neglect or omissions on the part of the Contractor any other contractor or subcontractor shall suffer loss or damage, the Contractor agrees to settle with such other contractor or subcontractor by agreement if such other contractor or subcontractor will so settle. If such other contractor or subcontractor shall assert any claim against the Owner on account of any damages alleged to have been sustained as a result of acts or omissions on the part of the Contractor, the Owner shall notify the Contractor who agrees to indemnify, defend, and save harmless the Owner against any such claim.

**28. Subcontracting**

- a. The Contractor may utilize the services of the specialty subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty subcontractors.
- b. However, when the Contractor utilizes the services of specialty subcontractors it shall be responsible for coordinating the Work between subcontractors and between subcontractors and its own forces. The Contractor shall not let the divisions and sections of the specifications or the identification of any drawings control its division of the Work among subcontractors and/or suppliers.
- c. Subsequent to the disclosure of subcontractors prior to award, a Contractor 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 Contractor involving performance of the work for which the subcontractor was listed and the Contractor 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 Contractor involving work for which the subcontractor was listed;
  7. must be substituted in order for the prime Contractor to satisfy required state and federal affirmative action requirements;
  8. refuses to agree or abide with the Contractor's labor agreement; or
  9. is determined by the Owner not to be a responsible subcontractor.

In addition, if a subcontractor on the list does not have a valid Alaska Business License and a valid Certificate of Registration under AS 08.18 at the time the bid was opened, the bidder may not use the subcontractor in the performance of the Contract, and shall replace the subcontractor with a subcontractor who had a valid Alaska Business License and a valid Certificate of Registration under AS 08.18 at the time the bid was opened.

- d. If a Contractor fails to list a subcontractor or lists more than one subcontractor for the same portion of work and the value of that work is in excess of half of one percent of the total bid, 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. A Contractor who attempts to circumvent the requirements of this section by listing as a subcontractor another contractor who, in turn, sublets the majority of the Work required under the Contract violates this section.

If a Contract is awarded to a Contractor who violates this section, the Owner may:

1. Cancel the Contract; or
2. After a notice and a hearing, assess a penalty on the Contractor in an amount that does not exceed 10 percent of the value of the subcontract at issue.

- e. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of the persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- f. In all subcontracts the Contractor enters into relative to the Work, the Contractor shall cause appropriate provisions to be inserted which will bind the subcontractors to the terms of this Contract, insofar as applicable to the Work of subcontractors and which will give to the Contractor the same powers that the Owner may exercise over the Contractor under any provisions of the Contract.
- g. The Contractor shall insert in all subcontracts or agreements entered into as regards the Project, the clauses contained in the Contract and such other clauses as the Owner may, by written instructions, require and also a clause requiring the subcontractors to include these same provisions in any lower-tier subcontracts or agreements which they may enter into together with a clause requiring this insertion in any further subcontracts or agreements that may in turn be made.
- h. Nothing contained in this Contract shall create any contractual relation between any subcontractor and the Owner. There are no intended third party beneficiaries to this Contract.

**29. Separate Contracts**

The Owner may undertake or award other contracts for additional work at or near the site of the Work under this Contract.

The Contractor shall coordinate its operations with those of other contractors and subcontractors. Cooperation shall be required in the arrangement for storing materials and in the detailed execution of the Work. The Contractor, including its subcontractors, shall keep informed of the progress and the detail work of other contractors and subcontractors and shall notify the Owner immediately of lack of progress or defective workmanship on the part of other contractors or subcontractors. Failure of the Contractor to keep informed of the Work progress on the job site and/or failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by the Contractor of the status of the Work as being satisfactory for proper coordination with the Contractor's own Work.

**30. Assignment of Component Contract by the Owner**

The Owner may enter into separate contracts with various component contractors to perform work or supply materials or services for the Project. The Contractor will be informed in the Special Conditions of the scope of component work. At any time after execution of the Contract, the Owner, at its sole discretion, may assign its interests, rights, and responsibilities in one or more component contracts to the Contractor.

The Contractor shall include in its bid an amount as compensation to Contractor for all supervision, overhead, bonds, profit, and all other general expenses associated with the assumption of the Owner's interests, rights, and responsibilities in the assigned component contracts.

**31. Special Consultants**

In the event the Contractor is required in the prosecution of the Work to employ the service of special consultants to aid in the performance of the Work, such shall be at the Contractor's sole expense, the cost of which shall be deemed to have been included in the Contract sum.

**32. Unit Prices as Contract Sum**

In the event that unit prices are called for in the Bid Form, such prices shall include, and shall be deemed by the parties to this Contract to include; all costs as defined in Clause 22 of these General Conditions and such other factors as may apply together with overhead costs and profit. Payment for the Work performed shall be at the unit price amount for each item of Work accepted by the Owner and conforming to Contract requirements.

**33. Owner-Furnished Materials**

- a. The Owner may elect to supply certain items of equipment, materials, or other goods to the Contractor for incorporation into the Project. When items are supplied under this Clause, the Contractor shall receive, off-load, haul, protect, store, and install such items in the Project as required by the Contract. A summary of Owner furnished items, their values, their locations or point of delivery to the Contractor, and, where applicable, a schedule of delivery shall be provided in the Special Conditions.

The Contractor shall include the following in its lump-sum bid:

1. The cost of technical direction, receiving, hauling, storing, handling, installing, and any other direct expenses required to incorporate the furnished items into the Project.
  2. The cost of all indirect or other expenses associated with item 1 above, including but not limited to Contractor's supervision, overhead, insurance, bonds, and profit.
- b. Title to all Owner-furnished material or property shall remain with the Owner. Unless otherwise provided in this Contract, the Contractor assumes the risk of, and shall be responsible for, any loss of or damage to Owner-furnished material provided under this Contract occurring after its delivery to Contractor. The Contractor shall include the value of the Owner-furnished materials under the All Risk Builder's Risk insurance in addition to the full Contract sum.

**34. Stated Allowances**

- a. If called for on the Bid Form, the Contractor shall include cash allowances in its proposal for work or materials to be included in the Project. The amount(s) to be allowed, if any, are stated on the Bid Form and in the Special Conditions, together with a general description of the work or materials involved.
- b. If the stated allowance or allowances are for design documents and complete specifications which are not available at the time of bid, subsequent to the award of this Contract, the Owner may, at its sole discretion, provide the Contractor with sufficient plans, specifications, and bidding documents to allow the Contractor publicly to solicit and obtain contract bids for the work or supply of the materials involved. On review and approval by the Owner, the Contractor shall enter into a subcontract with the lowest responsible bidder(s) on the form provided by the Owner with the bidding documents. If the actual subcontract price is more or less than the stated allowance provided by the Owner and included by the Contractor in its proposal, the Contract sum will be adjusted by modification accordingly. Thereafter, changes, if any, within the scope of the subcontract, subcontractor costs, subcontractor fees, and Contractor fees, shall be made as provided for under the Changes clause of the Contract.
- c. The Contractor shall include in its bid an amount as compensation to Contractor for all supervision, overhead, bonds, profit, and all other expenses associated with the solicitation of bids by public advertisement, assistance to the Owner in bid evaluation and award, and subsequent administration and supervision of the subcontract(s) awarded pursuant to this Clause 34.
- d. If the stated allowance or allowances are for technical direction of installation of Owner-furnished materials or equipment, the Contractor shall maintain an accurate record of allowed expenses and submit its accrued expenses monthly on its partial payment request, at which time it will be reviewed for payment. Should the actual expenses be more through no fault of the Contractor or less than the stated allowances provided by the Owner, the Contract sum will be adjusted by amendment accordingly.

**35. Periodic Payment to Contractor**

- a. On the basis of estimates of Work performed during the preceding calendar month and approved by the Owner, the Owner will make progress payments to the Contractor; but to ensure the proper performance of this Contract, the Owner may at any time, at its sole option, retain up to ten percent (10%) of the amount of progress payments until final completion and acceptance of all Work covered by this Contract; provided, that on completion and acceptance of the Work or of each separate building, public work, or other division of the Work on which the price is stated separately in the Contract, payment may be made in full for that portion completed and accepted including retained percentages less authorized deductions or other provisions of the Contract.
- b. Payment may be made for permanent materials associated with the Project and as yet not incorporated into the Work but which have been delivered to the job site and acceptably warehoused as approved by the Owner thereon, or delivered to and acceptably warehoused at an off-site storage location approved by the Owner. Invoices for permanent materials and equipment will be required identifying the Project and to whom shipped. An inventory record shall be kept of warehoused materials, including the location of said warehoused materials, and submitted with each request for payment showing materials incorporated into the Work for the previous pay period. Measurement of Work completed for payment purposes shall not include material and equipment warehoused at the site or at an off-site location.
- c. All material and Work upon which periodic payments have been made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and Work upon which periodic payments have been made, or the restoration of any damaged Work, or as a waiver of the right of the Owner to require the fulfillment of all the terms of the Contract.
- d. The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialman, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails to do so, then the Owner may, after having served written notice to the Contractor, either pay directly unpaid bills, of which the Owner has written notice, or withhold from Contractor's unpaid compensation a sum of money, in addition to retainage, deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payment to the Contractor shall be resumed in accordance with the terms of this Contract. In no event shall the provisions of the preceding sentence be construed to impose any obligations upon the Owner to either the Contractor or his surety. In paying any unpaid bills of the Contractor, the Contractor agrees that the Owner shall be deemed the agent of the Contractor, and Contractor further agrees that any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor. The Owner shall not be liable to the Contractor for any such payment made in good faith.
- e. On a form provided by the Owner, the Contractor shall prepare periodic payment requests. Three copies of the request, each signed separately by the Contractor, shall be delivered to the designated office of the Owner. The payment request shall be made out with the quantities or percentages previously approved by the Owner at the job site with assistance from the Contractor. Payment requests containing any inaccuracies or errors shall not be deemed submitted to the Owner and shall be promptly returned to the Contractor for correction and resubmission.
- f. No materials or supplies for the Work shall be purchased by the Contractor or any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that it has good title to all materials and supplies used in the work, free from all liens, claims, or encumbrances.

**36. Payment by Contractor**

The Contractor shall pay all persons supplying materials or service within eight (8) days after receipt of each payment from the Owner in accordance with AS 36.90, Article 3; the respective amounts allowed the Contractor on the approved monthly payment request for materials or Work performed or provided by all persons supplying materials or service to the extent of their interest therein; provided, however, that the Contractor may retain from the amount due any persons supplying materials or services a proportionate share of the amount, if any, retained by the Owner as provided for under Clause 35a. above; and provided further that the Contractor may also retain from the amount due any persons supplying materials or services any specific amount retained and identified by the Owner on the Periodic Payment Request as assignable to that persons supplying materials or service. In the event a person supplying materials or service is entitled to interest under AS 36.90, Article 3 on late payments or on amounts retained by the Contractor, the Contractor shall be solely responsible for satisfying claims for interest due on late payments and on amounts so retained. The Contractor expressly agrees to indemnify and hold harmless the Owner from any liability for interest payments due persons supplying materials or service on account of Contractor's late payments or on amounts retained by Contractor.

**37. Substantial Completion**

When the Contractor, by written notice to the Owner, certifies that the Work is Substantially Complete, the Owner and its representatives, within a reasonable time, will conduct an inspection to determine the actual status of completion. Approved Operation and Maintenance manuals shall be available at the time of Substantial Completion. See paragraph b. under "Acceptance, Release, and Final Payment" clause of these General Conditions for requirements. When the Owner, on basis of said inspection, determines that the Work is Substantially Complete for the use for which it was intended, it will then prepare a list of deficiencies to be corrected or completed by the Contractor and issue a Certificate of Substantial Completion. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The Certificate of Substantial Completion shall establish a date of Substantial Completion, shall state the responsibilities of the Owner and Contractor for maintenance, heat, and utilities, and shall fix the time within which the Contractor shall complete the entire Project. All insurance, including but not limited to property insurance and All Risk Builders' Risk Insurance, shall be maintained by the Contractor until final acceptance. The Certificate of Substantial Completion shall be submitted to the Contractor for its acceptance, and to the architect/engineer for its approval prior to the Owner signing, all acknowledging the respective responsibilities assigned to them in such certificate. The Owner, if it elects, shall have the right to take Beneficial Occupancy of the Work after the date of Substantial Completion; however, it must allow the Contractor reasonable access to complete or correct items on the deficiency list.

**38. Use and Occupancy Prior to Substantial Completion**

The Owner shall have the right to take possession of or use any completed or partially completed part of the Work. Before taking possession of or using any Work, the Owner shall furnish the Contractor a list of items of Work remaining to be performed or corrected on those portions of the Work that the Owner intends to take possession of or use. However, failure of the Owner to list any item of Work shall not relieve the Contractor of responsibility for complying with the terms of the Contract. The Owner's possession or use shall not be deemed an acceptance of any Work under the Contract. While the Owner has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the Work resulting from the Owner's possession or use. If prior possession or use by the Owner delays the progress of the Work or causes additional expense to the Contractor, an equitable adjustment shall be made in the Contract price or the time of completion, and the Contract shall be modified in writing accordingly.

**39. Acceptance, Release, and Final Payment**

- a. Upon receipt of written notice from the Contractor that the Work is ready for final inspection and acceptance, the Owner will conduct a final inspection. If the Work is found to be in accordance with the terms and conditions of the Contract, the Owner will notify the Contractor in writing accepting the Work. Until such acceptance, the Contractor will be responsible for the Work covered by the Contract.
- b. Prior to any final inspection (or Substantial Completion inspection, whichever is first) the Contractor will have previously submitted and have approved by the Owner, Operation and Maintenance (O&M) manuals. The O&M manuals will be in a form and shall contain such information as shall be directed by Owner.
- c. Neither the final payment nor the remaining retained percentage shall become due or deemed submitted to the Owner until the Contractor shall provide the Owner with (1) a Waiver and Release of Liens, on forms provided by the Owner, executed by the Contractor; (2) a Consent of Surety to Final Payment; (3) verification from the Department of Labor to release final payment; and (4) if required by the Owner, other data establishing payment or satisfaction of all obligations incurred in completing the Project, to the extent and in such form as may be designated by Owner. If any subcontractor refuses to furnish a release or waiver as required by the Owner, the Contractor shall furnish a bond satisfactory to the Owner to indemnify the Owner against any such obligation. If any such obligation remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such obligation, including all costs and reasonable attorney's fees.
- d. The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:
  1. unsettled liens;
  2. faulty or defective Work appearing after completion.
  3. failure of the Work to comply with the requirements of the Contract.
  4. terms of any special guarantees required by the Contract.
- e. The acceptance by the Contractor of final payment shall be and shall operate as a release of the Owner from all claims and all liability to the Contractor for all things done or furnished in connection with this Work and for every act and omission of the Owner and others relating to or arising out of this Work, except those claims of the Contractor previously made in writing and still unsettled. No payment, however, final or otherwise, shall operate to release the Contractor or its sureties from any continuing obligations under this Contract.

**40. General Guaranty**

- a. Neither the final payment nor any provision in the Contract nor partial or entire occupancy of the Project by the Owner shall constitute an acceptance of Work not done in accordance with the Contract or operate to relieve the Contractor of liability with respect to any warranties or responsibility for faulty materials or workmanship. In addition to any other warranties in this Contract, the Contractor shall remedy any defects in the work which appear within a period of one year from the date the general guaranty commences, unless a longer period is specified and shall pay for any damage to other work resulting there from. The Owner shall give notice of observed defects with reasonable promptness.
- b. The general guaranty shall commence upon Substantial Completion of the Work, as evidenced by the delivery to the Contractor of Owner's Certificate of Substantial Completion. If the Owner elects to take Beneficial Occupancy prior to Substantial Completion of the Work, the guaranty may only commence on those items of Work that are complete. The general guaranty as to Contractor's Work performed after Substantial Completion shall commence upon Owner's final acceptance, as evidenced by the delivery to the Contractor of Owner's written notice of acceptance.
- c. The Contractor, when notified by the Owner, shall immediately place in satisfactory condition, in every particular, any of the guaranteed Work at no cost to the Owner. The Contractor's warranty with respect to Work repaired or replaced will run for one year from the date of repair or replacement.

- d. If the Contractor fails to remedy any failure, defect, or damage within reasonable time after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.
- e. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for Work performed and materials furnished under this Contract, the Contractor shall:
  1. except as stated otherwise, obtain all warranties that would be given in normal commercial practice;
  2. require all warranties to be executed, in writing, for the benefit of the Owner, if directed by the Owner; and
  3. enforce all warranties for the benefit of the Owner, unless otherwise directed by the Owner.

**41. Interference with the Work**

Should the Contractor be prevented or enjoined from proceeding with Work either before or after the start of construction for any reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert any claim for damages by reason of said delay; but time for completion of the Work may be extended to such reasonable time as the Owner determines will compensate for time lost by such delay. Such determination shall be set forth in writing.

**42. Suspension of Work and Delays**

- a. The Owner may, for its convenience, order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as it may determine to be appropriate.
- b. If the performance of all or any part of the Work is suspended, delayed, or interrupted by the Owner as provided for in a. above, or by the Owner's failure to act within the time specified in this Contract, an adjustment shall be made for any increase in the cost of the Contract necessarily caused by such suspension, delay, or interruption, and the Contract modified as provided for under Clause 44 of these General Conditions. No adjustment shall be made under this Clause for any suspension, delay, or interruptions to the extent:
  1. that the suspension, delay, or interruption of performance results from the fault or negligence of the Contractor.
  2. for which an equitable adjustment is specifically provided for or excluded under any other provision of this Contract.
- c. No claim under this Clause shall be allowed:
  1. for any costs incurred more than ten (10) days before the Contractor shall have notified the Owner in writing of the act or omission involved (but this requirement shall not apply as to a claim resulting from a suspension order).
  2. unless the claim, in an amount certain, is presented to the Owner in writing as soon as possible after the termination of such suspension, delay, or interruption, but in no event later than the date of final payment under the contract.
- d. Any adjustment in Contract price made pursuant to this Clause shall be determined in accordance with the Price Adjustment Clause of this Contract.

**43. Differing Site Conditions**

- a. The Contractor shall promptly, and before the following conditions are disturbed, give a written notice to the Owner of:
  1. subsurface or latent physical conditions at the job site which differ materially from those indicated in this Contract, or



2. unknown physical conditions at the site of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in the work of the character provided for in this Contract.
- b. The Owner shall promptly investigate the site conditions after receiving the notice. If it finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the Work under this Contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made, and the Contract modified in writing accordingly.
- c. No request by the Contractor for an equitable adjustment to the Contract under this Clause shall be allowed unless the Contractor has given the written notice required in a. above.
- d. No request by the Contractor for an equitable adjustment to the Contract for differing site condition shall be allowed if asserted after final payment under this Contract.

#### **44. Changes**

- a. The Owner may, at any time without notice to the sureties, by written order designated or indicated to be a change order, make any change in the Work within the general scope of the Contract, including, but not limited to, changes:
  1. In the specifications (including drawings and designs).
  2. In the method or manner of performance of the Work.
  3. In the Owner-furnished facilities, equipment, materials, services, or job site.
  4. Directing acceleration in the performance of the Work.
- b. Any other written order or an oral order (which terms as used in this paragraph b. shall include direction, instruction, interpretation, or determination) from the Owner, which causes any such change, shall be treated as a change order under this Clause, provided that the Contractor gives the Owner written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a change order.
- c. Except as herein provided, no order, statement, or conduct of the Owner shall be treated as a change under this Clause or entitle the Contractor to an equitable adjustment hereunder.
- d. If any change under this Clause causes an increase or decrease in the Contractor's cost of, or the time required for the performance of any part of the Work under this Contract, whether or not changed by any such order, an equitable adjustment shall be made and the Contract modified in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph b. of this clause shall be made for any cost incurred more than ten (10) days before the Contractor gives written notice as required. In the case of defective specifications, for which the Owner is responsible, the equitable adjustment shall include any increased costs reasonably incurred by the Contractor in attempting to comply with such defective specifications.
- e. The Contractor must assert its right to an adjustment under this Clause, within thirty (30) days after receipt of a written change order under paragraph a. of this Clause, or the furnishing of a written notice under paragraph b. of this Clause, by submitting to the Owner a written statement describing the general nature and amount of proposal, unless this period is extended in writing by the Owner. The statement of proposal for adjustment may be included in the written notice by the Contractor required under b. above.
- f. No proposal by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract or if the Contractor fails to request an adjustment within the time and under the conditions set forth in e. above. As the Owners funds are fixed and limited, time constraints on notices will be strictly enforced.

- g. In the event the Contractor agrees to the price for a change in the Work and the Owner has issued its acceptance and notice to proceed prior to execution of such a change order, it shall be entitled to receive only the amount of said price for the performance of such change in Work.
- h. Any adjustment in Contract price made pursuant to this Clause shall be determined in accordance with the Price Adjustment Clause of this Contract.

#### **45. Disputes**

- a. The Owner will be, in the first instance, the interpreter of the requirements of the Contract and the judge of the performance thereunder.
- b. If the Owner has adopted regulations that are currently in effect concerning the procedure to be followed for the resolution of disputes and appeals arising out of claims regarding the performance or interpretation of construction contracts, such regulations apply, subject to the terms of this paragraph. All disputes arising out of or relating to this Contract shall be resolved as herein stated. To the extent that no process is applicable to a particular dispute or issue, Owner may determine a process. However, no claim may be processed under this Clause unless the underlying dispute was first promptly presented in writing to the appropriate contract manager for resolution under Clauses 42, 43, 44, or other applicable Clause(s) of these "General Conditions" or other controlling provision of the Contract. The term "promptly" shall mean the applicable time limit set forth in these "General Conditions" or other controlling provision in the Contract.
- c. If an adjustment under clauses 42, 43, 44, or other applicable clause(s) of these "General Conditions" or under another controlling provision of the Contract is disallowed by a contract manager, the Contractor shall, within fourteen (14) days after receipt of the contract manager's disallowance of the adjustment, provide written notice to the cognizant Contracting Officer of the Contractor's intention to file a claim under this Clause. Within twenty one (21) days after receipt of the Contract Manager's disallowance the Contractor shall presents its claim as required herein.
- d. As used herein, "claim" means a written demand or assertion by a party to the Contract seeking, as a matter of right, the payment of money, adjustment or interpretation of the Contract terms or other relief arising under or relating to the Contract.
- e. In presenting the claim, the claimant shall specifically include the following:
  - 1. The factual background surrounding the claim including accurate and complete supporting data.
  - 2. The Contract provisions that apply to the claim and under which it is made.
  - 3. The items and quantities, if any, upon which the claim is made.
  - 4. The specific relief requested, including the additional compensation claimed and the basis upon which it is calculated and/or the additional time requested and the basis upon which it is calculated.
  - 5. The specific exceptions to the Contract Manager's decision. The claimant shall certify that the claim is made in good faith, that the supporting data are accurate and complete to the best of its knowledge and belief, and that the relief requested accurately reflects the equitable adjustment for which it believes the Owner is liable.
- f. The scope of the claim or remedy applicable to it may not include costs or attorney's fees associated with the claim or dispute.
- g. Upon receipt of a claim under this Clause, the Contracting Officer shall request all parties to submit copies of pertinent papers and Contract Documents relating to the claim within a certain time. The Contracting Officer in his discretion may require any party to submit additional information, including a summary statement of the factual and legal basis of the claim.
- h. Upon receipt of the relevant documents, the Contracting Officer shall determine:

1. Whether there is reasonable cause to believe that the Contractor has presented a valid claim against the Owner for which relief may be granted. If the claim is clearly fraudulent or the Contractor makes or uses in support of its claim a misrepresentation, the Contracting Officer shall proceed in accordance with AS 36.30.687 (b) (initiate a specific finding) which may result in the Contractor forfeiting all claims and reimbursing the Owner for all costs, or
2. If the undisputed facts clearly support a determination that the Contract Manager's decision was correct, then the Contracting Officer may adopt the Contract Manager's decision and send written notice to the Contractor of the Contracting Officer's decision to adopt and that this constitutes the Contracting Officer's written decision under paragraph j. of this Clause and that it is a final decision unless appealed in accordance with paragraph k.
  - i. In lieu of dismissing the claim, the Contracting Officer may attempt to resolve the claim by informal conference and conciliation with the parties. Upon receipt of a settlement documents signed by the parties, the Contracting Officer shall dismiss the claim.
  - j. If the claim cannot be dismissed or resolved informally within 30 calendar days after the Contracting Officer received the relevant documents, then the Contracting Officer shall within 90 calendar days issue a written decision. The Contracting Officer shall review the facts relating to the dispute and obtain, if necessary, assistance from legal, fiscal and other advisors. The Contracting Officer shall mail the decision to the Contractor by certified mail.

If the Contracting Officer does not issue a written decision within 90 calendar days or within such longer period as may be agreed upon by the parties, then the Contractor may proceed as if an adverse decision had been received.

- k. Any party may appeal an adverse decision of a Contracting Officer under this Clause to the Chief Procurement Officer for Construction if filed within 14 calendar days after receipt of the Contracting Officer's decision or at the expiration of 90 days in the absence of a decision. A copy of the appeal shall be sent to the Contracting Officer.
  - l. A written notice of appeal to the Chief Procurement Officer for Construction need not be in any particular form. However, it must 1) evidence a desire to have the Chief Procurement Officer for Construction review the Contracting Officer's decision, 2) list specific factual and legal errors to the Contracting Officer's decision, and 3) be signed by the appellant or his authorized representative. General assertions that the Contracting Officer's decision is contrary to law or fact are not sufficient.
  - m. Within 15 calendar days after receipt of an appeal, the Chief Procurement Officer for Construction may adopt the Contracting Officer's written decision; otherwise, the Chief Procurement Officer for Construction shall, as soon as practicable, arrange a hearing in accordance with University of Alaska regulations and AS 36.30. The Chief Procurement Officer for Construction shall notify the Contractor of his or her decision to adopt the Contracting Officer's written decision and inform the Contractor that it may appeal this ruling to the Superior Court for the State of Alaska for a trial de novo.
  - n. At the conclusion of a hearing and within 30 days thereafter, the hearing officer, if other than the Chief Procurement Officer for Construction, shall make a written recommendation to the Chief Procurement Officer for Construction including findings of fact and conclusions of law. Upon due deliberation and within 60 days of receipt of the hearing officer's recommendation, the Chief Procurement Officer for Construction shall render a decision to affirm, reverse or modify the recommendation, or take other appropriate action. The Chief Procurement Officer for Construction's decision shall be set forth in writing and must articulate the basis for the decision. In the event the Chief Procurement Officer for Construction finds against the Contractor, he or she shall notify the Contractor that it may appeal to the Superior Court for the State of Alaska in accordance with the Alaska Rules of Appellate Procedure if it does so within 30 days from receipt of the Chief Procurement Officer for Construction's adverse decision.

- o. The Contractor shall proceed diligently with performance of the Contract pending final resolution of any claim or request for relief and shall comply with any decision of the Contract Manager or Contracting Officer pending said final resolution.

#### **46. Price Adjustment**

- a. Any adjustment in Contract price pursuant to Clauses in this Contract shall be determined, at the Owner's option, by one or more of the following methods:
  1. By agreement on a fixed price adjustment for all reasonable costs before commencement of the pertinent performance;
  2. By unit prices specified in the Contract or subsequently agreed upon;
  3. By the actual direct cost to include the following:
    - a) Labor, including foremen;
    - b) Materials entering permanently into the Work;
    - c) The Contractor's ownership cost or rental charges at competitive rates of the construction plant and equipment during the time of use on the extra Work;
    - d) Power and consumables supplied for the operation of power equipment;
    - e) Insurance;
    - f) Social security and unemployment contributions.
  4. In such other manner as the parties may mutually agree; or
  5. In the absence of agreement between the parties, by a unilateral determination by the Owner of costs attributable to the event or situation covered by the Clause, all as computed by the Owner in accordance with general accepted accounting principles, plus appropriate fee, as determined herein.
  6. Subject to any limitations prescribed elsewhere in the terms and conditions of the Contract, a reasonable fee for overhead and profit may be negotiated and included in any price adjustment under a. 1., 3., 4., and 5. by mutual agreement of the parties up to an amount not to exceed ten percent (10%) of the above actual direct costs incurred by the Contractor's own forces allocable to the price adjustment for overhead plus ten percent (10%) of the Contractor's direct costs, including overhead allocable to the price adjustment for profit. The cost of the subcontractor's Work shall be determined in the same manner. To the cost of subcontractor Work the Contractor, and any higher tiered subcontractor, may add an amount to be agreed upon but not to exceed ten percent (10%). The total fee shall be compensation to cover all indirect costs, profit and any other general expense except as follows: to the final price of the modification may be added the cost of payment and performance bonds, if appropriate. The amount added shall not be more than the product of the modification amount and the lowest stepped rate charged for payment/performance bonds based upon the Contract amount to date.

All proposals for price adjustment to the Contract including additions and deductions shall have itemized breakdowns of labor, materials, equipment, and other direct costs. Changes that include both monetary additions and deductions shall have the above fee computed only on the net direct cost addition; net deductive amounts or changes shall include a minimum five percent (5%) fee.

- b. The Contractor shall submit cost or pricing data for any price adjustments and shall certify that, to the best of the Contractor's knowledge and belief, the data submitted is accurate, complete, and current prior to the beginning of negotiations or as of a mutually determined specified date and will continue to be accurate and complete during the performance of the Contract. Certification below a specified amount may be waived by the Owner. Any price increase in connection with this Contract by any significant amount because the data was inaccurate or incomplete shall be reduced and the Contract modified according to the Owner's regulations or FAR 52.215-22 whichever is applicable.

#### **47. Right of the Owner to Terminate Contract**

a. Default:

1. If the Contractor violates any material provision of the Contract, or if it should make an assignment for the benefit of creditors, file a petition of bankruptcy, or if a receiver should be appointed on account of Contractor's insolvency, or if the Owner determines that the Contractor has failed to supply an adequate working force or material of proper quality or quantity, or has persistently disregarded the written instructions of the Owner, or has refused or failed to prosecute the Work or any separable part thereof with such diligence as will result in its completion within the time specified in the Contract, or any extension thereof, or if the Contractor fails to complete said Work within such time, the Owner may terminate the Contractor's right to proceed with the Work.
2. If any grounds for termination exist, the Owner may give written notice to the Contractor and the Contractor's sureties that if specified defaults are not remedied within the time set forth in such notice, the Contractor's right to proceed with the Work will automatically terminate.
3. Upon such termination, the Owner may:
  - a) require the Contractor's sureties to complete the Work;
  - b) take over the Work directly; or
  - c) employ another contractor to complete the Work.

In any event, in completing the Work, the Owner or its representative may utilize any materials, tools, equipment, and appliances that are at the job site and necessary for its completion.

4. If the Owner terminates the Contractor's right to proceed, or if the Contractor abandons the Work and the Work is completed by another, the Contractor shall not be entitled to receive any portion of the amount to be paid under the Contract until the Work is fully completed. After completion, if the unpaid balance owed to the Contractor exceeds the sum of the amount paid by the Owner in finishing the Work plus all damages sustained, including but not limited to such liquidated damages as provided for in this Contract, the excess not required by the Contract to be retained shall be paid to the Contractor; but if such sum exceeds the unpaid balance, the Contractor and his sureties shall be liable to the Owner for the excess.

b. Convenience:

1. The performance of Work under the Contract may be terminated by the Owner in accordance with this Clause in whole or from time to time in part:
  - a) Whenever, for any reason, the Owner shall determine that such termination is in the best interest of the Owner. Any such termination shall be effected by delivery to the Contractor of a Notice-of-Termination specifying whether the termination is for the convenience of the Owner, the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.
2. After receipt of a Notice-of-Termination and except as otherwise directed by the Owner, the Contractor shall:
  - a) Stop Work under the Contract on the date and to the extent specified in the

Notice-of-Termination.

- b) Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the Work under the Contract as is not terminated.
- c) Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the Notice-of-Termination.
- d) Assign to the Owner, in the manner and to the extent directed by the Owner, all right, title, and interest of the Contractor under the orders or subcontracts so terminated. The Owner shall have the right, in its discretion, to settle or pay any or all claims arising out of such termination of orders and subcontracts, the cost of which would be reimbursable in whole or in part, in accordance with the provisions of the Contract.
- e) With the approval or ratification of the Owner and to the extent it may require, which approval or ratification shall be final and conclusive for all purposes of this Clause, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, the cost of which would be reimbursable in whole or in part, in accordance with the provisions of this Contract.
- f) Transfer title to the Owner (to the extent that the title has not already been transferred) and deliver in the manner, at the times, and to the extent directed by the Owner: (i) The fabricated or unfabricated parts, Work in process, completed Work, supplies, and other material produced as a part of or acquired with respect to the performance of the Work terminated by the Notice-of-Termination; (ii) the completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would be required to be furnished to the Owner; and (iii) acquired or manufactured components for the performance of this Contract for the cost of which the Contractor has been or will be reimbursed under this Contract.
- g) Use Contractor's best efforts to sell in the manner, at the time, to the extent, and at the price or prices directed or authorized by the Owner any property of the types referred to in f. above; provided, however, that the Contractor: (i) Shall not be required to extend credit for any sale, and (ii) may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner; and, provided further, that the proceeds for any such transfer or disposition shall be applied to reduce any payments to be made by the Owner to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work covered by this Contract or paid in such other manner as the Owner may direct.
- h) Complete performance of such part of the Work as shall not have been terminated by the Notice-of-Termination.
- i) Take such action as may be necessary or as the Owner may direct for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Owner has or may acquire an interest.

The Contractor shall proceed immediately with the performance of the above obligations notwithstanding any delay in determining the adjustment of the amount of the fee, or any item, or reimbursable cost under this Clause. At any time after the effective date of termination as may be amended by the Owner from time to time, the Contractor shall submit to the Owner a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Owner, and may request that Owner remove such items or enter into a storage agreement covering them. Not later than fifteen (15) days thereafter, the Owner may accept such items and remove them or enter into a storage agreement covering the same, provided that the list submitted shall be subject to verification by the Owner upon removal of items or, if the items are stored, within forty-five (45) days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

3. After receipt of a Notice-of-Termination, the Contractor shall submit to the Owner its termination claim in the form and with the certification prescribed by the Owner. Such claim shall be submitted promptly but in no event later than six (6) months from the effective date of termination unless one or more extensions in writing are granted by the Owner upon request of the Contractor made in writing within such six-month period or any authorized extension thereof. However, if the Owner determines that the facts justify such action, it may receive and act upon any such termination claim at any time after such six-month period or any extension thereof. Upon failure of the Contractor to submit its termination claim within the time allowed, the Owner may, subject to any review required by the Owner's procedures or regulations in effect as of the date of execution of this Contract, determine on the basis of information available to it the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.
4. Subject to the provisions of paragraph 3 above and subject to any review required by the Owner's procedures or regulations in effect as of the date of execution of this Contract, the Contractor and the Owner may agree upon the whole or any part of the amount or amounts to be paid (including an allowance for the fee), if any, to the Contractor by reason of the total or partial termination of Work pursuant to this Clause. Upon agreement, the Contract shall be amended accordingly; and the Contractor shall be paid the agreed amount.
5. In the event of the failure of the Contractor and the Owner to agree in whole or in part as provided in paragraph above as to the amounts with respect to costs and fees, if any, to be paid to the Contractor in connection with the termination of Work pursuant to this Clause, the Owner shall, subject to any review required by the Owner's procedures in effect as of the date of execution of this Contract, determine on the basis of information available to it the amount, if any, due to the Contractor in connection with the termination and shall pay to the Contractor the amount determined as follows:
  - a) If the settlement includes costs and fees:
    - (i) There shall be included therein all costs and expenses reimbursable in accordance with this Contract and not previously paid to the Contractor for the performance of this Contract prior to the effective date of the Notice-of-Termination and such of these costs as may continue for a reasonable time thereafter with the approval of or as directed by the Owner, provided, however that the Contractor shall proceed as rapidly as practicable to discontinue such costs.
    - (ii) There shall be included therein, as far as not included under 1 above, the costs of settling and paying claims arising out of the termination of Work under subcontracts or orders as provided in paragraph b.2.e above, which are properly chargeable to the terminated portion of the contract.
    - (iii) There shall be included therein reasonable costs of settlement incurred by the Contractor, including but not limited to accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the termination, together with reasonable storage, transportation, and other costs incurred in connection with the protection of termination inventory.
    - (iv) If the terms of the Contract provide for a fee to be paid the Contractor, there shall be included in the settlement a portion of the fee determined at the Owner's option as follows:

If the fee is expressed as a lump sum, there shall be paid a percentage of the lump sum equivalent to the percentage of physical completion of the Work for which the fee applies, less any fee payments made previously.

If the amount determined under this subparagraph is less than the total fee payment theretofore made to the Contractor, the Contractor shall repay the excess amount to the Owner.

6. Any dispute arising from any determination made by the Owner under paragraph b.3 or b.5 above shall be resolved pursuant to Clause 45 of these General Conditions except that if the Contractor has failed to submit its claim within the time provided in paragraph b.3 above and has failed to request an extension of such time, the Contractor shall have no right to such resolution. In any case, where the Owner has made a determination of the amount due under paragraph b.3 or b.5 above, the Owner shall pay the Contractor the following: 1. If there is no right of resolution hereunder or if no timely resolution has been taken, the amount so determined by the Owner; or 2. if an appeal has been taken, the amount finally determined on such appeal.
7. In arriving at the amount due the Contractor under this Clause, there shall be deducted: 1. All advance or other payments applicable to the terminated portion of this Contract previously made to the Contractor; 2. the amounts of any claim that the Owner may have against the Contractor in connection with this Contract; and 3. the agreed price for, or proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold pursuant to the provisions of this Clause and not otherwise recovered by or credited to the Owner.
8. In the event of a partial termination, the portion of the fee which is payable with respect to the Work under the continued portion of the Contract shall be equitably adjusted by agreement between the Contractor and the Owner and such adjustment shall be evidenced by an amendment to this Contract.
9. The Owner may, from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of the Contract whenever, in the opinion of the Owner, the aggregate of such payments shall be within the amount to which the Contractor shall be entitled hereunder. If the total of such payments is in excess of the amount finally determined to be due under this Clause, such excess shall be payable by the Contractor to the Owner upon demand, together with interest computed at the rate of eight percent (8.0%) per annum, for the period from the date such excess payment attributable to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until ten (10) days after the date of such retention or disposition, or such later date as determined by the Owner by reason of the circumstances.

#### **48. Equal Employment Opportunity Requirements**

- a. For the term of this Contract, the Contractor shall comply with the Governor of Alaska Administrative Order #18 as amended, President of the United States Executive Order 11246 of September 24, 1965 as amended and specifically as follows:
  1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, sex, age, marital status, or mental or physical disability. The 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, national origin, ancestry, sex, age, marital status, or mental or physical disability. 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 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 consideration for employment without regard to race, color, religion, national origin, ancestry, sex, age, marital status, or mental or physical disability.
  3. The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice advising the labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, as amended, 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 No. 11246 of September 24, 1965, as amended, 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 No. 11246 of September 24, 1965, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Owner 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 such rule, 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 contracts in accordance with procedures authorized in Executive Order No. 11246 or as otherwise provided by law.
  7. The Contractor will include 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 No. 11246 of September 24, 1965, as amended by Executive Order 11375 and supplemented in Department of Labor regulations (41 CFR Part 60) so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontractor or vendor as may be directed by the Owner as a means of enforcing such provision including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the Owner to enter into such litigation to protect the interests of the Owner.
- b. The Contractor by submission of its bid on this Project and subsequently, if successful, by its signature on the Contract between the Owner and Contractor hereby certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not permit employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments and that it will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and washrooms, 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 which are segregated on the basis of race, color, religion, sex, or national origin, ancestry, age, marital status, or mental or physical handicap or disability because of habit, local custom, or otherwise. The Contractor agrees that it will obtain identical certifications for proposed subcontractor's vendor prior to award of subcontracts or purchase orders exceeding \$10,000 that are not exempt from the provisions of the Equal Opportunity clause in a. above.
- c. The Contractor (or first tier subcontractor) is herein advised of its obligation under 41 CFR 60-1.7: If it (1) has 50 or more employees and (2) has a contract with the Owner or subcontract on this Project amounting to \$50,000 or more and has not filed with the Office of Federal Contract Compliance (OFCCP) in Anchorage, Alaska on or before the 31st day of March complete and accurate reports on Standard Form 100 (EEO-1), it shall do so within thirty (30) days after award to it of a contract. Forms may be obtained from the same office. In addition, if the Contractor meets the requirements under c. (1) and (2) above, he shall within 120 days of receipt of written Notice-of-Award develop and maintain for the term of this contract a written affirmative action compliance program until such time as it is not required by law or regulation to develop and maintain such a program.

- d. The Contractor and subcontractors shall provide written notification to the appropriate OFCCP office within ten (10) working days of award of any construction contract in excess of \$10,000 at any tier for construction work under this Contract. The Contractor and subcontractors holding contracts of \$10,000 or more shall comply with a 28 percent minority manpower utilization goal in each of the following trades: Asbestos workers, Carpenters, Electricians, Ironworkers, Operating Engineers, Painters, Pile Drivers, Plumbers and Steam Fitters, Roofers, Sheet Metal Workers, and Teamsters. The Contractor and subcontractors shall not discriminate against any employee or applicant for employment because he or she is a disabled veteran, veteran of the Vietnam era, or handicapped person in regard to any position for which the employee or applicant for employment is qualified.
- e. In accordance with Executive Order 11625, special efforts must be made to maximize the participation of Minority Business Enterprises (MBES). The Contractor agrees to award subcontracts to MBES to the fullest extent consistent with efficient performance of the Contract. If required by the Owner, the Contractor shall present records to the Owner evidencing the Contractor's efforts to solicit Minority Business Enterprises prior to the award of any subcontracts.
- f. The Owner shall have recourse to the following sanctions and penalties for the Contractor's or subcontractor's failure to meet its affirmative action commitment:
  1. Cancel, terminate, suspend, or cause to be canceled, terminated, or suspended, any contract or subcontract relating to construction by the Owner or any portion or portions thereof for failure of the Contractor or subcontractor to comply with the affirmative action provisions of the Contract. Contracts may be canceled, terminated, or suspended absolutely, or continuation of the contract may be conditioned upon a program for future compliance approved by the Owner. (A.O. #18)

**49. Alaska Statute Title 36**

The provisions of Alaska Statute Title 36, Public Contracts, as amended and/or supplemented are hereby incorporated in the contract by this reference. Effective July 1, 2003, AS 36.05.045 requires the filing of a Notice of Work with the Department of Labor, payment of filing fees, and the filing of a Notice of Completion. The Contractor is advised that Compliance with AS 36 et seq. is mandatory with no change in the Contract sum.

**50. Payrolls and Basic Records**

- a. The Contractor shall maintain payrolls and basic records for all laborers and mechanics during the course of the Work and shall preserve them for a period of three (3) years thereafter. Such records shall contain at a minimum the name and address of each such employee, his correct classification, rate of pay (including rates of contribution for, or costs assumed to provide, fringe benefits), daily and weekly number of hours worked, deductions made, and actual wages paid.
- b. One certified copy of all payroll reports shall be submitted bi-weekly to the Owner. In addition, one certified copy of all payroll reports shall be submitted bi-weekly to the State Department of Labor, irrespective of applicable wage rates (State or Federal) in compliance with Alaska Statute 36.05.040, Filing Schedule of Employees, Wages Paid, and Other Information. The copy to the Owner shall be accompanied by a Statement of compliance certifying: (1) That the wage rates contained therein are not less than the current prevailing rates of pay issued by the Department of Labor in effect ten (10) days before the final date for submission of bids on this Contract or as modified every 24 months, (2) that no deductions have been made other than those permissible under the Copeland Act, (3) that the classifications set forth for each laborer or mechanic conforms with the work he or she performed, and (4) the wage rates contained therein are not less than the current prevailing rates of pay issued by the U.S. Department of Labor. The Contractor shall be responsible for the submission of certified copies of payrolls of all subcontractors.

- c. The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, reports, payrolls, estimates, records, and other data as the Owner may request concerning Work performed or to be performed under this Contract. The Owner's auditors, timekeepers, and inspectors shall be afforded access to all of the Contractor's books, records, correspondence, instructions, drawings, receipts, vouchers, subcontracts, memoranda, etc. relating to this Contract; and the Contractor shall preserve all such records for a period of three (3) years after Final Payment hereunder.
- d. The Owner may audit the books and records of a Contractor or a subcontractor including material suppliers to the extent that the books and records relate to the performance of the Contract or any subcontract. Books and records shall be maintained by the Contractor for a period of three years after the date of final payment under the Contract and by the subcontractor for a period of three years after the date of final payment under the subcontract.
- e. The Contractor shall insert in all subcontracts the requirements set forth in subparagraphs a., b., c., and d. of this Clause and also a provision that the subcontractors include these requirements in any lower tier subcontracts which they may enter into together with a provision requiring this insertion in any further subcontracts that may in turn be made.

**51. Apprentices**

Apprentices shall be permitted to work as such only when they are registered, individually, under a bona fide apprenticeship program registered with a state apprenticeship agency that is recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or under a program registered with the Bureau of Apprenticeship and Training, United States Department of Labor. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the Contractor as to the Contractor's entire work force under the registered program. The Contractor or subcontractor will be required to furnish to the Owner written evidence of the registration of their program and apprentices as well as of the appropriate ratios and wage rates for the area of construction prior to using any apprentices on the Work.

**52. Copeland (Anti-Kickback) Act**

The Contractor shall comply with the Copeland "Anti-Kickback" Act (18 USC 874 and 40 USC 276c) and the Anti-Kickback Act of 1986 (41 USC 51-58) and Regulations of the Secretary of Labor (29 CFR, Part 3) that are herein incorporated by reference. The Contractor shall comply with any amendments or modifications to this Act or these regulations and shall be responsible for the submission of affidavits required of subcontractors.

**53. Overtime Compensation**

- a. No Contractor or subcontractor contracting for any part of the Work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any laborer or mechanic in any work week in which he is employed on such Work to work in excess of eight hours in any calendar day or in excess of forty (40) hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work week, as the case may be.
- b. In the event of any violation of the requirements set forth in subparagraph a. above, the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for such unpaid wages. In addition, such Contractor and subcontractor shall be liable to the Owner for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the requirements set forth in subparagraph a. above in the amount of \$20 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard work week of forty hours without payment of the overtime wages required by subparagraph a. above.

- c. The Owner may withhold or cause to be withheld from any monies payable on account of Work performed by the Contractor or subcontractor such sums as Owner may determine to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in subparagraph b. above.
- d. The Contractor shall insert in all subcontracts the requirements set forth in subparagraphs a., b., and c. of this Clause and also a provision that the subcontractors include these requirements in any lower tier subcontracts which they may enter into together with a provision requiring this insertion in any further subcontracts that may in turn be made.

#### **54. Minimum Wages**

All mechanics, laborers, and field surveyors employed by the Contractor or subcontractor under this Contract will be paid the higher of the current prevailing wage rates established by the State Department of Labor and the U.S. Department of Labor.

All mechanics, laborers, and field surveyors employed by the Contractor or subcontractor at the job site under this Contract will be paid unconditionally and not less than once a week and without subsequent deduction or rebate on any account, except such payroll deductions as are permissible under the Copeland Act, the prevailing rate of wages that were in effect ten (10) days before the final date for submission of bids for this 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. The scale of wages to be paid shall be posted by the Contractor in a prominent and easily accessible place at the job site. The Owner shall withhold so much of the accrued payments from periodic payments as is necessary to pay to laborers, mechanics, or field surveyors employed by the Contractor or subcontractor the difference between:

1. The rates of wages required by the Contract to be paid laborers, mechanics, or field surveyors in the Work.
2. The rates of wages in fact received by laborers, mechanics, and field surveyors on the Work.

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 wage less than the rate of wages required by the Contract to be paid, the Owner by written notice to the Contractor may terminate its 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 its sureties are liable to the Owner for excess costs for completing the Work as a result of a violation of the provisions of this Clause.

#### **55. Employment Preference**

It is the policy of the State of Alaska that to fulfill the duty of loyalty owed to its citizens and to remedy social or economic problems, the State will grant an employment preference to residents when the State is acting as a market participant. The Contractor including its subcontractors for the duration of this Project shall comply with AS 36.10, Employment Preference, now in effect, and all regulations promulgated for its implementation currently in effect and those that may become in effect.

#### **56. Alaska Forest Products Preference**

In accordance with AS 36.15 and AS 36.30.322 whenever timber, lumber, and manufactured lumber products are required in this Project, only timber, lumber, and manufactured lumber products originating in this State from local forests shall be used wherever practicable. The Contractor for the duration of this Project shall purchase only timber, lumber, and manufactured lumber products harvested in this State whenever priced no more than seven percent above products harvested outside the State, available and of like quality when compared with timber, lumber, or manufactured lumber products harvested outside the State.

To meet this requirement the Contractor shall keep records documenting its solicitation efforts in obtaining Alaska Forest Products from suppliers listed with the Department of Community and Economic Development on its "Alaska Products Preference List". The Contractor shall provide the Owner with this record upon request, on the anniversary date of award and at the completion of the Contract. Failure to comply with this requirement or to provide records as required shall result in the Owner withholding all payments until compliance is met.

**57. Alaska Products and Recycled Alaska Products Preference**

When a Contractor designates the use of an Alaska Product or Recycled Alaska Product at bid opening in order to receive a preference, the Contractor must use the product or products designated. The Contractor shall keep records documenting its use of the Alaska Product or Recycled Alaska Product and provide the Owner these records upon request, on the anniversary date of the award and at the completion of the Contract.

If a Contractor who designates the use of an Alaska Product or Recycled Alaska Product in a bid fails to use the designated product for a reason within its control the Contract shall be reduced an amount equal to the percent preference it requested on the Alaska Product plus one percent of the value of the Alaska Product.

**58. Protection of Lives and Health**

In order to protect the lives and health of its employees under the Contract, the Contractor shall comply with all pertinent provisions of Alaska Statute 18.60 and with all pertinent provisions of the "Construction Safety Code" and "General Safety Code" issued by the Alaska Department of Labor and shall take or cause to be taken such additional measures as the Owner may determine to be reasonably necessary for this purpose. The Contractor alone shall be responsible for the safety, efficiency, and adequacy of its plant, appliances, and methods, and for any damage that may result from their failure or their improper construction, maintenance, or operation.

The Contractor shall provide all required environmental, safety and health oversight, training, equipment, materials supplies and documentation (including but not limited to Material Safety Data Sheets, training records, signage, and data) for their employees and subcontractors. Further, Contractor shall be solely responsible and accountable for all fines and penalties resulting from any environmental, health or safety violations by their employees or subcontractors that occurs while performing the Work.

**59. Clean Air and Water**

The Contractor shall comply with all regulations set forth in the Alaska Administrative Code (AAC) Title 18, Environmental Conservation, Chapter 50, Air Quality Control.

In addition, if the Contract amount exceeds \$100,000:

- a. The Contractor shall comply will all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857(h), Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and EPA regulations (40 CFR Part 15) which prohibit the use under federal contracts or grants, facilities included on the Environmental Protection Agency (EPA) List of Violating Facilities.
- b. The Contractor warrants that any facilities to be used in the performance of this Contract are not listed on the EPA List of Violating Facilities.
- c. The Contractor will include a provision substantially the same as this, including this paragraph c. in every non-exempt subcontract.

**60. Hazardous Substances: Spills, Reporting & Communication Plan**

Title 18 of the Alaska Administrative Code Section 75.300 mandates the reporting of oil spills and hazardous material spills in a timely manner to the Department of Environmental Conservation (DEC). The Contractor may have responsibility under the law as the person in charge if an oil or hazardous spill occurs or is caused by any of its employees, suppliers or subcontractors. The Contractor, however, is responsible under this Contract to report any project related spills caused by its employees, suppliers or subcontractors within the time-lines given below to the Owner, Safety Officer and to its Project Representative in order for these persons to warn the Owner's employees, students and the general public on its property of a potentially hazardous condition. This Clause, or its effect, shall be in all of the Contractor's purchase orders, contracts and subcontracts and shall make each of the Contractor's subcontracted parties responsible to the Contractor as the Contractor is to the Owner.

The following chart shows the time-line for reporting of various size spills:

<u>Substance</u>	<u>Quantity</u>	<u>Spill on</u>	<u>Time to Report</u>
Hazardous Material	Any Amount	Land or Water	Immediately
Oil	Less than 0.5 pints or causes Less than 100 SF sheen	Water	7 Days
Oil	Greater than 55 gals. or causes Greater than 1000 SF sheen	Water	Immediately
Oil	Other than above	Water	24 Hours
Oil	Less than 10 gals.	Land	7 Days
Oil	Greater than 10 gals, but Less than 56 gals.	Land	24 Hours
Oil	Greater than 55 gals.	Land	Immediately

For all toxic or hazardous materials the Contractor uses in the performance of this Contract it shall have available a Material Safety Data Sheet (MSDS) as required under 8 AAC 15.0101 (g). For any of the "extremely hazardous substances" under the Superfund Amendments & Reauthorization Act (SARA) Title III used onsite, if the Hazard Rating Standard (NFPA 704M) is greater than zero (0) in any of the four categories (i.e. health, fire, special and reactivity) of hazardous substances, the Contractor shall be responsible for having onsite not only the Material Safety Data Sheet for each extremely hazardous substance, but a hazard communication program and plan for its employees to follow in the event of an accident. The Owner shall make available to the Contractor Material Safety Data Sheets for any toxic or hazardous substance under its control that the Contractor may encounter in its work under this Contract.

The contractor shall be responsible for all training, documentation, permits and activities associated with the introduction or generation of any hazardous wastes from its own activities and own materials utilized in the course of fulfilling this Contract.

**61. Laws Concerning University of Alaska**

This Contract is made and entered into under and subject to all provisions of the Constitution and laws of the State of Alaska and the United States of America governing, controlling, or affecting the Owner, or the operations or powers of the Owner. The Contractor shall perform the Contractor's agreements and undertakings entered into pursuant to the terms of this Contract in accordance with and subject to all the provisions of the Constitution and laws of the State of Alaska and the United States of America, it being specifically understood that all are, by this reference, hereby made a part of this Contract.

**62. Provisions Required by Law Deemed Inserted**

Each and every provision of law required by law to be inserted in this Contract shall be deemed to be inserted herein; and if through mistake or otherwise any such provision is not inserted or is not correctly inserted, then upon the request of either party, the Contract shall forthwith be physically amended to make such insertion or correction.

**63. Interest of Member of or Delegate to Congress**

No member of or delegate to Congress or state official shall be entitled to any share or part of this Contract or to any benefit that may arise there from, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

**64. Other Prohibited Interests**

No official of the Owner who is authorized to act in such capacity on behalf of the Owner to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction, or material supply contract, or any subcontract in connection with the construction of the Project, shall become directly or indirectly associated personally except in his official capacity in this Contract or in any part hereof. No officer, employee, architect, attorney, engineer, or inspector of or for the Owner who is authorized to act in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory, or other similar functions in connection with the Construction of the Project shall become directly or indirectly interested personally except in his official capacity in this Contract, or any part thereof, or in any material supply contract, subcontract, insurance contract, or in any other contract pertaining to the Project.

**65. General Provisions**

- a. United States Currency. All references to dollars in this Agreement refer to United States currency.
- b. Time. Time is of the essence of this Agreement.
- c. Waiver. The failure of any party to insist upon the strict performance of any provision of this Agreement or to exercise any right, power or remedy consequent upon a breach thereof shall not constitute a waiver by said party of any such provision, breach or subsequent breach of the same or any other provision.
- d. Remedies. Except as otherwise expressly provided in this Agreement, the parties shall be entitled to any and all remedies provided by Law and all such remedies shall be cumulative.
- e. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, and all of which, taken together, shall constitute a single agreement. This Agreement shall not become binding upon any party unless and until all parties have executed at least one counterpart of this Agreement.
- f. Further Actions. The parties hereby agree to take any and all actions and execute, acknowledge and deliver any and all documents reasonably necessary to effect the purposes of this Agreement.
- g. Modification of Agreement. This Agreement may be modified only by an instrument in writing duly executed by and delivered to all of the parties hereto.
- h. Entire Agreement. The Contract Documents embody the entire agreement and understanding between the parties and supersedes all prior agreements and understandings, whether written or oral, relating to the subject matter hereof.
- i. Law Governing. This Agreement shall be interpreted and construed in accordance with, and governed and enforced in all respects by, the laws of the State of Alaska, and any litigation arising pursuant to this Agreement shall only be brought after exhausting all administrative remedies in the Alaska Superior Court for the Fourth Judicial District, in Fairbanks, Alaska.

- j. Severability. If any provision of this Agreement or any application thereof shall be found to be invalid or unenforceable by a court of competent jurisdiction, the remainder of this Agreement and any other application of such provision shall remain valid and be interpreted to effectuate the purposes of the agreement as a whole.
- k. Binding Effect. The rights, obligations and liabilities set forth in or arising under this Agreement shall extend to, be binding upon, and inure to the benefit of the parties and their respective successors and assigns.
- l. Paragraph Headings. The descriptive paragraph headings throughout this Agreement are for convenience and reference only, and the words contained therein shall not be held to expand, modify, amplify or aid in the interpretation or construction of this Agreement.
- m. Interpretation of the Agreement. This Agreement is the result of a public process in which Contractor had a full and unrestricted right to examine this Agreement before submitting its proposal or bid for this Agreement and prior to executing it and accordingly this Agreement shall not be construed against the drafting party.
- n. Relationship of the Parties. Nothing in this Agreement shall be construed to make the Owner an agent, a partner, or a joint venturer with the Contractor.
- o. Exhibits. All Exhibits to this Agreement are adopted by reference and incorporated herein as if fully set forth in this Agreement.
- p. Survival. Any obligation under this Agreement arising before such expiration or termination, shall survive the expiration or termination of this Agreement. Notwithstanding any other provision contained herein, until the Contractor's obligations pursuant to Clause 19 of this Agreement are fully satisfied, all of Contractor's obligations to insure and indemnify the Owner shall continue.
- q. Capitalized Terms. Unless a contrary meaning is clearly intended, terms that begin with capitalized letters shall have the meaning provided in Clause 1 or, if not defined in Clause 1, as explained in the contract. If a term is not capitalized, it shall have the meaning attributed to the term in common usage in the context in which it is used.

END OF GENERAL CONDITIONS



## SPECIAL CONDITIONS

SC-01 **Time for Completion:** The work which the Contractor is required to perform under this Contract shall be commenced on the date stipulated by the Owner in the Notice-of-Award to the Contractor. Contractor shall have access to the project site on **May 8, 2017.**

Substantial Completion shall be achieved on, **August 3, 2017.**

SC-02 **Liquidated Damages:** Liquidated damages will be assessed in the amount of **\$250.00** per day for each calendar day of delay beyond the date of Substantial Completion as stated in SC-01 or any extensions thereof which may be granted pursuant to the General Conditions.

SC-03 **Professional Liability:** This project does not require professional liability insurance.

SC-04 **Change GC 13.e.4 Builder's Risk Insurance:** All Risk Builder's Risk Insurance is not required.

SC-05 **Permits:** The Contractor shall procure and pay for all permits, licenses and approvals as per General Conditions 14.a.

SC-06 **Camping:** There will be no camping or overnight stays allowed on University Property.

SC-07 **Salvage:** The Owner, at its sole option, may direct that salvage and/or surplus materials be delivered unloaded and stored on the Owner's property. Such place of storage will be within a five (5) mile radius of the project site. Surplus materials shall not be sold or transferred to University of Alaska employees.

SC-08 **Smoking:** There is to be no smoking on or in UAA Buildings.

Effective November 19, 2015 the University's policy is as follows:

### *A. Prohibitions*

*Smoking and the use of all tobacco and tobacco-related products are prohibited within all university real property, buildings and vehicles. Littering an area with, or with the remains of, tobacco-related or smoking-related products is also prohibited. This prohibition applies to all university events, events held on university grounds or property and applies to all members of the university community including faculty, staff, students, friends, volunteers, patients, customers, vendors, contractors, guests and visitors.*

### *B. Definitions*

- 1. "contractor" means anyone contracted to do work at a university site or property.*
- 2. "smoking" means inhaling, exhaling, burning, or carrying of any lighted or heated or vaporized tobacco-related product or non-tobacco plant product, or operating an electronic smoking or vaping device, instrument or apparatus which can be used to simulate the experience of smoking, or which can be used to house a liquid containing*

*nicotine for delivery in any form to the user, including but not limited to hookahs, water pipes, e-cigarettes, e-cigars, e-pipes, and vape pens.*

*3. "tobacco" and "tobacco-related products" include all forms of tobacco, including but not limited to cigarettes, cigars, pipes, kreteks, bidis, other inhalable burning substances and all smokeless tobacco and tobacco-containing products.*

*4. "tobacco use" includes inhaling, smoking, sniffing, chewing, dipping, or any other assimilation of tobacco products.*

*5. "university real property and buildings" includes buildings, trailers, facilities, campus grounds, athletic facilities, university vehicles, exterior open spaces, covered walkways, breezeways, walkways between sections of buildings, trails, exterior stairways and landings, recreational areas, university-owned parking lots, driveways, loading docks, university-owned streets, shuttle bus stops, sidewalks within all university campuses, and all property that is owned, operated, leased, occupied or controlled by the university except as specified below.*

*6. "vendor" means anyone providing goods or services on university property or grounds.*

### C. Exclusions

*The prohibition in this regulation shall not apply in the following situations, to the extent that smoking or the use of tobacco or tobacco-related products is otherwise in conformity with applicable state, local and federal law:*

*1. Personally owned vehicles parked or being driven on the campus, provided that the vehicles are not within a university parking garage;*

*2. Public sidewalks or public rights-of-way that border a campus;*

*3. Use of a non-combustion nicotine product approved by the United States Food and Drug Administration for tobacco use cessation or harm reduction, as long as the product when used as instructed does not produce any vapors, fumes, smoke, gases, mists, particulates or other emissions in amounts significant enough to be detectable by third persons. This includes over-the-counter products (patches, gum, lozenges) and certain prescription products (nasal sprays, personal inhalers);*

*4. Areas within a fenced construction project in which the contractor has complete care, custody, and control of the job site, if the relevant contract explicitly authorizes the contractor to allow smoking within the site, provided that any smoking is to occur no less than 50 feet distant from the exterior fence.*

SC-09

**Discrepancy-Order of Precedence** In the event that any provision of one Contract Document conflicts with a provision of any other Contract Document, the provision of that Contract Document first listed shall govern, except as otherwise specifically stated:

- a. This Agreement
- b. Exhibits, attachments, etc. incorporated herein by reference.
- c. Instructions to Bidders
- d. The Special Conditions
- e. Special written instructions to the Contractor, if any.
- f. The General Conditions
- g. Manufacturer's instructions with reference to approved materials.
- h. The Technical Specifications.

- i. The Contract Drawings

SC-10

**Project Management Software:** The University of Alaska (UAA) Facilities Planning and Construction (FP&C) department is currently utilizing **eBuilder**, a project management software to assist with document management. The contractor will be required to use this software. The contractor will be granted two (2 ea.) seats (users) giving them access to the software, subcontractors will not be provided seats. Training will be provided by UAA. The project management software will be used for but not limited to:

- a. Architect's Supplement Instructions (ASI's)
- b. Owner Change Directives
- c. Requests for Information (RFI's)
- d. Substitution Requests
- e. Contractor's Daily Log
- f. Payment Applications/Invoices
- g. Potential Change Orders
- h. Change Orders
- i. Submittals

Reference GC 00 70 00, Paragraph 17, Submittal Schedule. The submittal schedule will be completed on an excel document provide by UAA to the Contractor. The excel file will be submitted as outlined for review and upon approval will be imported into the project management software, which will formally establish the submittal register.

- j. All other project documents

END SPECIAL CONDITIONS

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## Laborers' & Mechanics' Minimum Rates of Pay

For additional copies of this pamphlet go to:

<http://labor.alaska.gov/lss/forms/pamp600-090116.pdf>

Title 36. Public Contracts  
AS 36.05 & AS 36.10  
Wage & Hour Administration  
Pamphlet No. 600

State of Alaska  
Department of Labor and Workforce Development

Commissioner Heidi Drygas  
Effective September 1, 2016  
Issue 33

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# Laborers' & Mechanics' Minimum Rates of Pay

Effective September 1, 2016  
Issue 33



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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

September 1, 2016

**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 by 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 September 1, 2016.

All projects with a final bid date of September 11, 2016, 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 resident hire requirements, please contact the nearest Wage and Hour office. These offices are listed on Page xi.

Sincerely,

  
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.

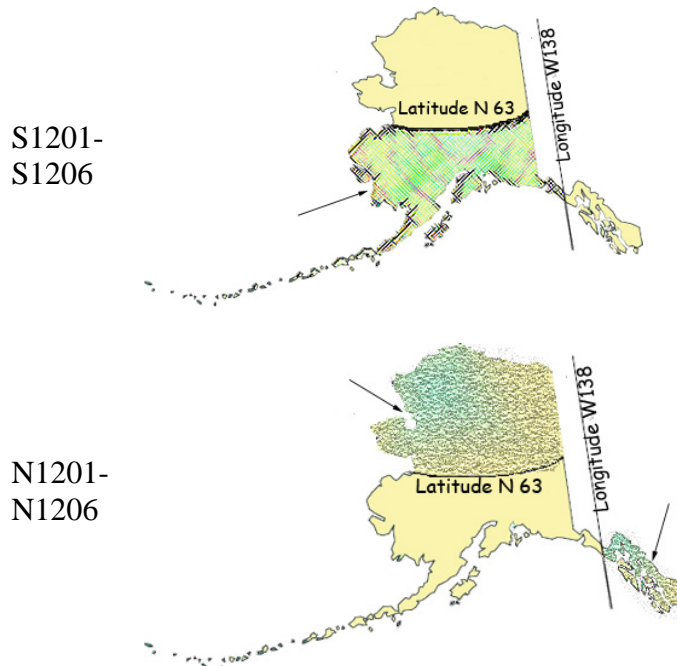
**Sec. 36.05.900. Definition.**

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: [anchorage.lss-wh@alaska.gov](mailto:anchorage.lss-wh@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: anchorage.lss-wh@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, 2015, and remains in effect through June 30, 2017. This determination will be applied to projects with a bid submission deadline on or after July 1, 2015 and to projects previously covered by the 2013 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  
Anchorage, Alaska 99504-2098  
Phone: (907) 269-4900

Email:  
anchorage.lss-wh@alaska.gov

**Juneau**

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

Email:  
juneau.lss-wh@alaska.gov

**Fairbanks**

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

Email:  
fairbanks.lss@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

Bengal Groups, LLC	November 3, 2017
Mohammed Ali, Individual	November 3, 2017
Fry’s Services, LLC	November 16, 2017
John Paul Freie, Individual	November 16, 2017
Pyramid Audio & Video, Ltd.	June 19, 2018
Jeffrey P. Schneider, Individual	June 19, 2018

# 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

<b>A0101</b>	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

<b>A0201</b>	Blocklayer	40.81	9.53	8.50	0.55	L&M 0.15	0.49	60.03
--------------	------------	-------	------	------	------	----------	------	-------

Bricklayer  
 Marble or Stone Mason  
 Refractory Worker (Firebrick, Plastic, Castable, and Gunitite Refractory Applications)  
 Terrazzo Worker  
 Tile Setter

<b>A0202</b>	Tuck Pointer Caulker	40.81	9.53	8.50	0.55	L&M 0.15	0.49	60.03
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Cleaner (PCC)

<b>A0203</b>	Marble & Tile Finisher	34.79	9.53	8.50	0.55	L&M 0.15	0.49	54.01
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Terrazzo Finisher

<b>A0204</b>	Torginal Applicator	38.83	9.53	8.50	0.55	L&M 0.15	0.49	58.05
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## Carpenters, Statewide

\*\*See note on last page if remote site

<b>A0301</b>	Carpenter (journeyman)	38.34	9.78	14.56	0.70	L&M 0.10	SAF 0.15	63.63
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Lather/Drywall/Acoustical

## Cement Masons, Region I (North of N63 latitude)

\*\*See note on last page if remote site

<b>N0401</b>	Group I, including:	37.50	7.43	11.80	1.18	L&M 0.10		58.01
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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	L&M	THR
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**Cement Masons, Region I (North of N63 latitude)**  
 \*\*See note on last page if remote site

<b>N0401</b>	Group I, including:	37.50	7.43	11.80	1.18		<b>L&amp;M</b> 0.10	58.01
	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							

<b>N0402</b>	Group II, including:	37.50	7.43	11.80	1.18		<b>L&amp;M</b> 0.10	58.01
	Form Setter							

<b>N0403</b>	Group III, including:	37.50	7.43	11.80	1.18		<b>L&amp;M</b> 0.10	58.01
	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							

<b>N0404</b>	Group IV, including:	37.50	7.43	11.80	1.18		<b>L&amp;M</b> 0.10	58.01
	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							

<b>N0405</b>	Group V, including:	37.75	7.43	11.80	1.18		<b>L&amp;M</b> 0.10	58.26
	Plasterer							

**Cement Masons, Region II (South of N63 latitude)**  
 \*\*See note on last page if remote site

<b>S0401</b>	Group I, including:	37.25	7.43	11.80	1.18		<b>L&amp;M</b> 0.10	57.76
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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

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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**Cement Masons, Region II (South of N63 latitude)**  
 \*\*See note on last page if remote site

<b>S0401</b>	Group I, including:	37.25	7.43	11.80	1.18	<b>L&amp;M</b>		57.76
	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							
<b>S0402</b>	Group II, including:	37.25	7.43	11.80	1.18	<b>L&amp;M</b>		57.76
	Form Setter							
<b>S0403</b>	Group III, including:	37.25	7.43	11.80	1.18	<b>L&amp;M</b>		57.76
	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							
<b>S0404</b>	Group IV, including:	37.25	7.43	11.80	1.18	<b>L&amp;M</b>		57.76
	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							
<b>S0405</b>	Group V, including:	37.50	7.43	11.80	1.18	<b>L&amp;M</b>		58.01
	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
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**Culinary Workers \* See note on last page**

<b>A0501</b>	Baker/Cook	25.67	7.25	6.37			<b>LEG</b> 0.07	39.36
<b>A0503</b>	General Helper	22.62	7.25	6.37			<b>LEG</b> 0.07	36.31
	Housekeeper							
	Janitor							
	Kitchen Helper							
<b>A0504</b>	Head Cook	26.22	7.25	6.37			<b>LEG</b> 0.07	39.91
<b>A0505</b>	Head Housekeeper	23.04	7.25	6.37			<b>LEG</b> 0.07	36.73
	Head Kitchen Help							

**Dredgemen**  
\*\*See note on last page if remote site

<b>A0601</b>	Assistant Engineer	39.26	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	61.36
	Craneman							
	Electrical Generator Operator (primary pump/power barge/dredge)							
	Engineer							
	Welder							
<b>A0602</b>	Assistant Mate (deckhand)	38.10	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	60.20
<b>A0603</b>	Fireman	38.54	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	60.64
<b>A0605</b>	Leverman Clamshell	41.79	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	63.89
<b>A0606</b>	Leverman Hydraulic	40.03	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	62.13
<b>A0607</b>	Mate & Boatman	39.26	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	61.36
<b>A0608</b>	Oiler (dredge)	38.54	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	60.64

**Electricians**

<b>A0701</b>	Inside Cable Splicer	39.82	12.19	13.01	0.95		<b>L&amp;M</b> 0.20	<b>LEG</b> 0.15	66.32
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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

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

<b>A0702</b>	Inside Journeyman Wireman, including: Technicians	39.49	12.19	13.25	0.95	L&M	LEG	66.23
<b>A0703</b>	Power Cable Splicer	52.27	12.19	18.76	0.95	0.20	0.15	84.52
<b>A0704</b>	Tele Com Cable Splicer	47.45	12.19	15.44	0.95	L&M	LEG	76.38
<b>A0705</b>	Power Journeyman Lineman, including: Power Equipment Operator Technician	50.52	12.19	18.71	0.95	L&M	LEG	82.72
<b>A0706</b>	Tele Com Journeyman Lineman, including: Technician Tele Com Equipment Operator	45.70	12.19	18.56	0.95	L&M	LEG	77.75
<b>A0707</b>	Straight Line Installer - Repairman	45.70	12.19	15.39	0.95	L&M	LEG	74.58
<b>A0708</b>	Powderman	48.52	12.19	18.65	0.95	L&M	LEG	80.66
<b>A0710</b>	Material Handler	26.15	11.64	4.78	0.15	L&M	LEG	43.02
<b>A0712</b>	Tree Trimmer Groundman	27.17	12.19	11.04	0.15	L&M	LEG	50.85
<b>A0713</b>	Journeyman Tree Trimmer	35.84	12.19	11.30	0.15	L&M	LEG	59.78
<b>A0714</b>	Vegetation Control Sprayer	39.29	12.19	11.40	0.15	L&M	LEG	63.33
<b>A0715</b>	Inside Journeyman Communications CO/PBX	38.07	12.19	12.96	0.95	L&M	LEG	64.52

**Elevator Workers**

<b>A0802</b>	Elevator Constructor	36.75	14.43	14.96	0.60	L&M	VAC	70.39
<b>A0803</b>	Elevator Constructor Mechanic	52.50	14.43	14.96	0.60	L&M	VAC	88.62

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

<b>A0902</b>	Asbestos Abatement-Mechanical Systems	37.38	8.84	9.51	1.20	SAF	0.12	57.05
<b>A0903</b>	Asbestos Abatement/General Demolition All Systems	37.38	8.84	9.51	1.20	SAF	0.12	57.05
<b>A0904</b>	Insulator, Group II	37.38	8.84	9.51	1.20	SAF	0.12	57.05
<b>A0905</b>	Fire Stop	37.38	8.84	9.51	1.20	SAF	0.12	57.05

**IronWorkers**  
 \*\*See note on last page if remote site

<b>A1101</b>	Ironworkers, including:	36.25	8.33	19.87	1.57	L&M	IAF	0.20	0.36	66.58
	Bender Operators									
	Bridge & Structural									
	Machinery Mover									
	Ornamental									
	Reinforcing									
	Rigger									
	Sheeter									
	Signalman									
	Stage Rigger									
	Toxic Haz-Mat Work									
	Welder									
<b>A1102</b>	Helicopter	37.25	8.33	19.87	1.57	L&M	IAF	0.20	0.36	67.58
	Tower (energy producing windmill type towers to include nacelle and blades)									
<b>A1103</b>	Fence/Barrier Installer	32.75	8.33	19.62	1.47	L&M	IAF	0.20	0.36	62.73
	Guard Rail Installer									
<b>A1104</b>	Guard Rail Layout Man	33.49	8.33	19.62	1.47	L&M	IAF	0.20	0.36	63.47

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

<b>N1201</b>	Group I, including:	30.00	7.71	17.06	1.20	L&M	LEG	0.20	0.20	56.37
	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

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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**Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)**  
 \*\*See note on last page if remote site

						L&M	LEG	
<b>N1201</b>	Group I, including:	30.00	7.71	17.06	1.20	0.20	0.20	56.37
	Brush Cutter							
	Camp Maintenance Laborer							
	Carpenter Tender or Helper							
	Choke Setter, Hook Tender, Rigger, Signalman							
	Concrete Labor (curb & gutter, chute handler, grouting, curing, 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							

<b>N1202</b>	Group II, including:	31.00	7.71	17.06	1.20	0.20	0.20	57.37
	Burning & Cutting Torch							
	Cement or Lime Dumper or Handler (sack or bulk)							

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

						L&M	LEG	
<b>N1202</b>	Group II, including:	31.00	7.71	17.06	1.20	0.20	0.20	57.37

- 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)
- Foam Gun or Foam Machine Operator
- Green Cutter (dam work)
- Gunite Operator
- Hod Carrier
- Jackhammer or Pavement Breaker (more than 45 pounds)
- 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	
<b>N1203</b>	Group III, including:	31.90	7.71	17.06	1.20	0.20	0.20	58.27

- 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

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

<b>N1203</b>	Group III, including:	31.90	7.71	17.06	1.20	L&M	LEG	58.27
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Welding Certified (in connection with laborer's work)

<b>N1204</b>	Group IIIA	35.18	7.71	17.06	1.20	L&M	LEG	61.55
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- 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)
- Licensed Powderman
- Pioneer Drilling & Drilling Off Tugger (all type drills)
- Pipelayers
- Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)

<b>N1205</b>	Group IV	19.57	7.71	17.06	1.20	L&M	LEG	45.94
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- Final Building Cleanup
- Permanent Yard Worker

<b>N1206</b>	Group IIIB	38.72	5.00	17.06	1.20	L&M	LEG	62.38
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- Federally Licensed Powderman (Responsible Person in Charge)
- Grade Checking (setting or transferring of grade marks, line and grade, Stake Hopper)

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

<b>S1201</b>	Group I, including:	30.00	7.71	17.06	1.20	L&M	LEG	56.37
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- 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, grouting, curing, screeding)
- Crusher Plant Laborer
- Demolition Laborer
- Ditch Digger
- Dumpman
- Environmental Laborer (hazard/toxic waste, oil spill)
- Fence Installer
- Fire Watch Laborer
- Flagman

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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**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	
<b>S1201</b>	Group I, including:	30.00	7.71	17.06	1.20	0.20	0.20	56.37
	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	
<b>S1202</b>	Group II, including:	31.00	7.71	17.06	1.20	0.20	0.20	57.37
	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)							
	Foam Gun or Foam Machine Operator							
	Green Cutter (dam work)							
	Gunite Operator							
	Hod Carrier							
	Jackhammer or Pavement Breaker (more than 45 pounds)							

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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**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	
<b>S1202</b>	Group II, including:	31.00	7.71	17.06	1.20	0.20	0.20	57.37

- 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	
<b>S1203</b>	Group III, including:	31.90	7.71	17.06	1.20	0.20	0.20	58.27

- 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)

						L&M	LEG	
<b>S1204</b>	Group IIIA	35.18	7.71	17.06	1.20	0.20	0.20	61.55

- 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)
- Licensed Powderman
- Pioneer Drilling & Drilling Off Tugger (all type drills)
- Pipelayers
- Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)

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

<b>S1205</b>	Group IV	19.57	7.71	17.06	1.20		<b>L&amp;M</b> 0.20	<b>LEG</b> 0.20	45.94
	Final Building Cleanup								
	Permanent Yard Worker								

<b>S1206</b>	Group IIIB	38.72	5.00	17.06	1.20		<b>L&amp;M</b> 0.20	<b>LEG</b> 0.20	62.38
	Federally Licensed Powderman (Responsible Person in Charge)								
	Grade Checking (setting or transferring of grade marks, line and grade, Stake Hopper)								

**Millwrights**

<b>A1251</b>	Millwright (journeyman)	36.74	9.78	12.21	1.00		<b>L&amp;M</b> 0.40	0.05	60.18
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<b>A1252</b>	Millwright Welder	37.74	9.78	12.21	1.00		<b>L&amp;M</b> 0.40	0.05	61.18
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**Painters, Region I (North of N63 latitude)**  
\*\*See note on last page if remote site

<b>N1301</b>	Group I, including:	32.07	8.03	11.10	1.08		<b>L&amp;M</b> 0.07		52.35
	Brush								
	General Painter								
	Hand Taping								
	Hazardous Material Handler								
	Lead-Based Paint Abatement								
	Roll								

<b>N1302</b>	Group II, including:	32.59	8.03	11.10	1.08		<b>L&amp;M</b> 0.07		52.87
	Bridge Painter								
	Epoxy Applicator								
	General Drywall Finisher								
	Hand/Spray Texturing								
	Industrial Coatings Specialist								
	Machine/Automatic Taping								
	Pot Tender								
	Sandblasting								
	Specialty Painter								
	Spray								
	Structural Steel 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

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
<b>Painters, Region I (North of N63 latitude)</b>								
**See note on last page if remote site								
<b>N1302</b>	Group II, including:	32.59	8.03	11.10	1.08		<b>L&amp;M</b> 0.07	52.87
	Wallpaper/Vinyl Hanger							
<b>N1304</b>	Group IV, including:	38.13	8.03	12.11	1.05	0.05		59.37
	Glazier							
	Storefront/Automatic Door Mechanic							
<b>N1305</b>	Group V, including:	29.31	8.03	5.02	0.83	0.07		43.26
	Carpet Installer							
	Floor Coverer							
	Heat Weld/Cove Base							
	Linoleum/Soft Tile Installer							
<b>Painters, Region II (South of N63 latitude)</b>								
**See note on last page if remote site								
<b>S1301</b>	Group I, including :	30.31	8.03	10.85	1.08		<b>L&amp;M</b> 0.07	50.34
	Brush							
	General Painter							
	Hand Taping							
	Hazardous Material Handler							
	Lead-Based Paint Abatement							
	Roll							
	Spray							
<b>S1302</b>	Group II, including :	31.56	8.03	10.85	1.08		<b>L&amp;M</b> 0.07	51.59
	General Drywall Finisher							
	Hand/Spray Texturing							
	Machine/Automatic Taping							
	Wallpaper/Vinyl Hanger							
<b>S1303</b>	Group III, including :	31.66	8.03	10.85	1.08		<b>L&amp;M</b> 0.07	51.69
	Bridge Painter							
	Epoxy Applicator							
	Industrial Coatings Specialist							
	Pot Tender							
	Sandblasting							
	Specialty Painter							
	Structural Steel 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



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

<b>S1304</b>	Group IV, including:	38.13	8.03	11.36	1.08		<b>L&amp;M</b> 0.07	58.67
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Glazier  
Storefront/Automatic Door Mechanic

<b>S1305</b>	Group V, including:	29.31	8.03	5.02	0.83		<b>L&amp;M</b> 0.07	43.26
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Carpet Installer  
Floor Coverer  
Heat Weld/Cove Base  
Linoleum/Soft Tile Installer

**Piledrivers**

\*\*See note on last page if remote site

<b>A1401</b>	Piledriver	38.34	9.78	14.56	0.70		<b>L&amp;M</b> 0.10	<b>IAF</b> 0.15	63.63
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Assistant Dive Tender  
Carpenter/Piledriver  
Rigger  
Sheet Stabber  
Skiff Operator

<b>A1402</b>	Piledriver-Welder/Toxic Worker	39.34	9.78	14.56	0.70		<b>L&amp;M</b> 0.10	<b>IAF</b> 0.15	64.63
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<b>A1403</b>	Remotely Operated Vehicle Pilot/Technician	42.65	9.78	14.56	0.70		<b>L&amp;M</b> 0.10	<b>IAF</b> 0.15	67.94
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Single Atmosphere Suit, Bell or Submersible Pilot

<b>A1404</b>	Diver (working) ***See note on last page	82.45	9.78	14.56	0.70		<b>L&amp;M</b> 0.10	<b>IAF</b> 0.15	107.74
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<b>A1405</b>	Diver (standby) ***See note on last page	42.65	9.78	14.56	0.70		<b>L&amp;M</b> 0.10	<b>IAF</b> 0.15	67.94
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<b>A1406</b>	Dive Tender ***See note on last page	41.65	9.78	14.56	0.70		<b>L&amp;M</b> 0.10	<b>IAF</b> 0.15	66.94
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<b>A1407</b>	Welder (American Welding Society, Certified Welding Inspector)	43.90	9.78	14.56	0.70		<b>L&amp;M</b> 0.10	<b>IAF</b> 0.15	69.19
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**Plumbers, Region I (North of N63 latitude)**

<b>N1501</b>	Journeyman Pipefitter	40.81	8.25	14.60	1.25		<b>L&amp;M</b> 1.10	<b>S&amp;L</b>	66.01
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Plumber

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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**Plumbers, Region I (North of N63 latitude)**

<b>N1501</b>	Journeyman Pipefitter	40.81	8.25	14.60	1.25		L&M 1.10 S&L	66.01
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Welder

**Plumbers, Region II (South of N63 latitude)**

<b>S1501</b>	Journeyman Pipefitter	39.85	8.88	12.72	1.25		L&M 0.20	62.90
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Plumber

Welder

**Plumbers, Region IIA (1st Judicial District)**

<b>X1501</b>	Journeyman Pipefitter	37.52	12.72	11.25	2.50		L&M 0.24	64.23
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Plumber

Welder

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

<b>A1601</b>	Group I, including:	40.03	9.95	11.05	1.00		L&M 0.10	62.13
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- 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
- 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)

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

A1601	Group I, including:	40.03	9.95	11.05	1.00	0.10	L&M	62.13
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- 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
- 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
- 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
- Unlicensed Off-Road Hauler
- Wate Kote 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

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

<b>A1602</b> Group IA, including:		41.79	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	63.89
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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

<b>A1603</b> Group II, including:		39.26	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	61.36
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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)
- Skidder
- Trenching Machines (under 16 inches)
- Water/Waste Water Treatment Operator

<b>A1604</b> Group III, including:		38.54	9.95	11.05	1.00		<b>L&amp;M</b> 0.10	60.64
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- "A" Frame Trucks, Deck Winches
- Bombardier (tack or tow rig)
- Boring Machine
- Brooms, Power
- Bump Cutter

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

**Power Equipment Operators**

\*\*See note on last page if remote site

<b>A1604</b>	Group III, including:	38.54	9.95	11.05	1.00			<b>L&amp;M</b>	60.64

- 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

<b>A1605</b>	Group IV, including:	32.33	9.95	11.05	1.00			<b>L&amp;M</b>	54.43

- Crane Assistant Engineer/Rig Oiler
- Drill Helper
- Parts & Equipment Coordinator
- Spotter
- Steam Cleaner
- Swamper (on trenching machines or shovel type equipment)

**Roofers**

\*\*See note on last page if remote site

<b>A1701</b>	Rofer & Waterproofer	42.62	11.75	2.91	0.81			<b>L&amp;M</b>	58.22

<b>A1702</b>	Rofer Material Handler	29.83	11.75	2.91	0.81			<b>L&amp;M</b>	45.43

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 I (North of N63 latitude)**

<b>N1801</b>	Sheet Metal Journeyman	47.13	10.16	10.64	1.45		<b>L&amp;M</b> 0.12	69.50
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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)**

<b>S1801</b>	Sheet Metal Journeyman	41.38	10.16	12.25	1.22		<b>L&amp;M</b> 0.37	65.38
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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

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)**

<b>S1801</b>	Sheet Metal Journeyman	41.38	10.16	12.25	1.22	<b>L&amp;M</b> 0.37	65.38
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Skylight installation

**Sprinkler Fitters**

<b>A1901</b>	Sprinkler Fitter	44.75	8.77	13.35	0.45	<b>L&amp;M</b> 0.25	67.57
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**Surveyors**

\*\*See note on last page if remote site

<b>A2001</b>	Chief of Parties	42.81	10.58	10.39	1.35	<b>L&amp;M</b> 0.10	65.23
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<b>A2002</b>	Party Chief	41.22	10.58	10.39	1.35	<b>L&amp;M</b> 0.10	63.64
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<b>A2003</b>	Line & Grade Technician/Office Technician	40.62	10.58	10.39	1.35	<b>L&amp;M</b> 0.10	63.04
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<b>A2004</b>	Associate Party Chief (including Instrument Person & Head Chain Person)	38.50	10.58	10.39	1.35	<b>L&amp;M</b> 0.10	60.92
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<b>A2005</b>	Stake Hop/Grademan	35.57	10.58	10.39	1.35	<b>L&amp;M</b> 0.10	57.99
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<b>A2006</b>	Chain Person (for crews with more than 2 people)	34.16	10.58	10.39	1.35	<b>L&amp;M</b> 0.10	56.58
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**Truck Drivers**

\*\*See note on last page if remote site

<b>A2101</b>	Group I, including:	39.59	10.58	10.39	1.35	<b>L&amp;M</b> 0.10	62.01
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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 & trucks with pups) over 40 yards up to & including 60 yards

Helicopter Transporter

Lowboys, including attached trailers & jeeps, up to & including 12 axles (over 12 axles or 150 tons to be negotiated)

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

**Truck Drivers**

\*\*See note on last page if remote site

**A2101** Group I, including:      39.59 10.58 10.39 1.35      **L&M**      0.10      62.01

- Material Coordinator and 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 10.39 1.35      **L&M**      0.10      63.28

- Dump Trucks (including rockbuggy & trucks with pups) over 60 yards up to & including 100 yards (over 100 yards to be negotiated)
- Jeeps (driver under load)

**A2103** Group II, including:      38.33 10.58 10.39 1.35      **L&M**      0.10      60.75

- All Deltas, Commanders, Rollagons, & similar equipment
- Boom Truck/Knuckle Truck (over 5 tons)
- Construction and Material Safety Technician
- Dump Trucks (including rockbuggy & 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)
- Lowboys (including attached trailers & jeeps up to & including 8 axles)
- Mechanics
- Partsman
- Ready-mix (over 7 yards up to & including 12 yards)
- Stringing Truck
- Super Vac Truck/Cacasco Truck/Heat Stress Truck
- Turn-O-Wagon or DW-10 (not self loading)

**A2104** Group III, including:      37.51 10.58 10.39 1.35      **L&M**      0.10      59.93

- Batch Trucks (8 yards & up)
- Boom Truck/Knuckle Truck (up to & including 5 tons)
- Dump Trucks (including rockbuggy & 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
- Oil Distributor Driver
- Thermal Plastic Layout Technician
- Traffic Control Technician

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

<b>A2104</b>	Group III, including:	37.51	10.58	10.39	1.35		<b>L&amp;M</b> 0.10	59.93
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Trucks/Jeeps (push or pull)

<b>A2105</b>	Group IV, including:	36.93	10.58	10.39	1.35		<b>L&amp;M</b> 0.10	59.35
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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)
- Combination Truck-Fuel & Grease
- Compactor (when pulled by rubber tired equipment)
- Dump Trucks (including Rockbuggy & 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
- Tireman, Light Duty
- Track Truck Equipment
- Vacuum Truck, Truck Vacuum Sweeper
- Warehouseperson
- Water Truck (Below 250 Bbls)
- Water Truck, Dual Axle
- Water Wagon, Semi

<b>A2106</b>	Group V, including:	36.17	10.58	10.39	1.35		<b>L&amp;M</b> 0.10	58.59
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- Batch Truck (up to & including 7 yards)
- Buffer Truck
- Bull Lifts & Fork Lifts, Fork Lifts with Power Boom & Swing Attachments (up to & including 5 tons)

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

							L&M	
<b>A2106</b>	Group V, including:	36.17	10.58	10.39	1.35	0.10		58.59
	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
<b>N2201</b>	Group I, including:	33.00	7.71	17.06	1.20	0.20	0.20	59.37
	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
<b>N2202</b>	Group II, including:	34.10	7.71	17.06	1.20	0.20	0.20	60.47
	Burning & Cutting Torch							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Concrete Laborer							
	Jackhammer							
	Laser Instrument Operator							
	Nozzlemen, Pumpcrete or Shotcrete							
	Pipelayer Helper							

							L&M	LEG
<b>N2203</b>	Group III, including:	35.09	7.71	17.06	1.20	0.20	0.20	61.46
	Miner							
	Retimberman							

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

						L&M	LEG	
<b>N2204</b>	Group IIIA, including:	38.70	7.71	17.06	1.20	0.20	0.20	65.07
	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)							
	Licensed Powderman							
	Pioneer Drilling & Drilling Off Tugger (all type drills)							
	Pipelayer							
	Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)							

						L&M	LEG	
<b>N2206</b>	Group IIIB, including:	42.59	5.00	17.06	1.20	0.20	0.20	66.25
	Federally Licensed Powderman (Responsible Person in Charge)							
	Grade Checking (setting or transferring of grade marks, line and grade, 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	
<b>S2201</b>	Group I, including:	33.00	7.71	17.06	1.20	0.20	0.20	59.37
	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	
<b>S2202</b>	Group II, including:	34.10	7.71	17.06	1.20	0.20	0.20	60.47
	Burning & Cutting Torch							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Concrete Laborer							
	Jackhammer							
	Laser Instrument Operator							
	Nozzlemen, Pumpcrete or Shotcrete							
	Pipelayer Helper							

						L&M	LEG	
<b>S2203</b>	Group III, including:	35.09	7.71	17.06	1.20	0.20	0.20	61.46
	Miner							
	Retimberman							

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

\*\*See note on last page if remote site

<b>S2204</b> Group IIIA, including:		38.70	7.71	17.06	1.20		<b>L&amp;M</b> 0.20	<b>LEG</b> 0.20	65.07
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- 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)
- Licensed Powderman
- Pioneer Drilling & Drilling Off Tugger (all type drills)
- Pipelayer
- Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)

<b>S2206</b> Group IIIB, including:		42.59	5.00	17.06	1.20		<b>L&amp;M</b> 0.20	<b>LEG</b> 0.20	66.25
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- Federally Licensed Powderman (Responsible Person in Charge)
- Grade Checking (setting or transferring of grade marks, line and grade, Stake Hopper)

**Tunnel Workers, Power Equipment Operators**

\*\*See note on last page if remote site

<b>A2207</b> Group I		44.03	9.95	11.05	1.00		<b>L&amp;M</b> 0.10		66.13
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<b>A2208</b> Group IA		45.97	9.95	11.05	1.00		<b>L&amp;M</b> 0.10		68.07
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<b>A2209</b> Group II		43.19	9.95	11.05	1.00		<b>L&amp;M</b> 0.10		65.29
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<b>A2210</b> Group III		42.39	9.95	11.05	1.00		<b>L&amp;M</b> 0.10		64.49
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<b>A2211</b> Group IV		35.56	9.95	11.05	1.00		<b>L&amp;M</b> 0.10		57.66
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\* 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

DIVISION 1

UAA PSB ROOF REPLACEMENT

PROJECT NO. 14-0040

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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of Project
- B. Owner Furnished Materials and Equipment
- C. Work under other contracts
- D. Assigned Contracts
- E. Work Restrictions - Contractor use of premises and Owner occupancy

1.02 RELATED SECTIONS

- A. General and Special Conditions
- B. Technical Specifications Section.

1.03 SUBMITTALS

- A. Prior to beginning work, provide a list of employees who will be working on the site.
- B. Provide a list of Emergency contacts for after hour issues.

1.04 DESCRIPTION OF PROJECT

- A. The Work includes the following items. The Contract Documents reflect the detailed scope of work.
  - 1. General Work description: The work generally consists of removal of a concrete paver ballast on XPS insulation over built-up asphalt roof system. Installation of a new mineral cap surfaced, built-up asphalt roof system with insulation and vapor retarder. Project includes roof related carpentry, insulation, metal flashing, roof drainage and minor electrical and mechanical work.
- B. The Contract Documents were prepared for the Project by:  

Bezек Durst Seiser  
3330 C Street, Suite 200  
Anchorage, AK 99503  
Telephone: 907.562.6076
- C. The Work will be constructed under a single lump sum prime contract.

- D. Contract Documents: The Contractor will be provided with one (1) set of conformed contract documents (if applicable) with the Notice to Proceed. The Contractor may, at his own expense, have additional sets reproduced from Owner's original.

1.05 OWNER SUPPLIED MATERIALS AND EQUIPMENT

- A. Owner furnished equipment includes the following: None.

1.06 WORK UNDER OTHER CONTRACTS: None.

1.07 ASSIGNED CONTRACTS: None.

1.08 WORK RESTRICTIONS – CONTRACTOR USE OF PREMISES AND OWNER OCCUPANCY

- A. BUILDING SECURITY: Provide for security of any area of the building turned over to the Contractor for his exclusive use. Security responsibility for areas that are partially or fully occupied by the Owner will remain with the Owner.
- B. Prior to beginning work, provide a list of employees who will be working on the site.
- C. Owner occupancy is described and shown on the matrix indicated on the Drawings.
- D. Limit construction activities which generate noise levels in excess of NC=50, as sensed in occupied areas of the facility. Coordinate with Project Manager on occupancy periods.
- E. The Owner will occupy portions of the facility during the entire period of construction for the conduct of his normal operations.
- F. Maintain IBC complying access through corridors, stairways, and building exits to Owner occupied areas at all times.
- G. While working in Owner occupied areas:
  - 1. Cover and protect from dust and debris, at the start of each work day, electronic office equipment such as personal computer terminals, FAXs, copiers, printers, postage meters, monitors, etc. and electronic or sensitive research equipment. Remove protection at the end of each workday.
  - 2. Do not use furniture, such as countertops, desks, filing cabinets, bookshelves, and tables as work surfaces or as steps to access Work.
  - 3. At the end of each workday, move back to original location equipment and furniture moved to accommodate Work. Do not move electronic or sensitive equipment unless absolutely necessary to accomplish Work and only after obtaining approval from the Owner. Do not disconnect electronic equipment from data communications systems without Owner assistance.
  - 4. Clean work areas, including floors with a vacuum, and remove tools,



- equipment, and construction material from work areas at the end of each workday.
5. Make existing systems fully operational for intended purpose during Owner occupied hours.
  6. Provide temporary lighting, equal to that provided by the existing lighting system, whenever neither the existing lighting system nor the new lighting system is available to provide lighting equal to that provided by the existing system.
  7. Provide temporary power, equal to that provided by the existing power system, when neither the existing power system nor the new power system is available to provide power equal to that provided by the existing power system.
  8. Smoking and use of all tobacco and tobacco-related products are prohibited within all university real property and buildings. See Special Condition SC-08.
  9. The use of alcohol is not permitted on University Property except in residential units by the occupants and their guests and in compliance with all state and local laws.
- H. A sprinkler system serving a Work Area will not be considered to be complete until the fire alarm system supervision for that sprinkler system is also fully operational, tested and accepted.
- I. It is recognized that completed work areas or work areas not yet available for construction may have to be accessed to accomplish Work associated with Work Areas currently under construction. In addition to requirements for working in Owner occupied areas stated elsewhere:
1. Coordinate access with the various trades requiring access to minimize disruption of Owner activities.
  2. Schedule Work so that nearby offices and classrooms are not disrupted. Coordinate with the Owner.
  3. Give written notice one week in advance of beginning Work in specific areas. Include with notice a schedule of the Work requiring access.
  4. Replace ceiling tiles removed to access Work at the end of each workday.
- J. Materials Storage and Protection: An area will be assigned to the Contractor for materials stored in the closest possible proximity to the project site. Providing protection and security for the area is the responsibility of the Contractor.
1. Any materials stored outside of the buildings being worked on under this contract will be kept in the designated storage area.
  2. Materials will be stored in occupied buildings only in the locations as directed by the Owner.

END OF SECTION

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PART 1 GENERAL

1.01 SECTION INCLUDES: General description of the scope of work for each of the alternates. The scope of work for each of the alternates is identified in Drawings and Specifications. These descriptions shall not be interpreted to conflict with the Drawings and Specifications.

**Alternate No. 1**

**Metal Wall Panels – Provide metal wall panels as per the A5 drawing and the specification 07 41 12.**

1.02 RELATED DOCUMENTS AND REQUIREMENTS

- A. Instructions To Bidders, Clause 12, Comparison and Evaluation of Bids
- B. Bid Form
- C. Technical Specifications
- D. Drawings

END OF SECTION

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PART 1 GENERAL

1.1 RELATED DOCUMENTS:

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

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related sections include the following:
  - 1. Division 1 Section "Product Requirements" for administration procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES

- A. Architect will issue through the Owner's representative supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Contractor Initiated Proposals: If latent or unforeseen conditions require modification to the Contract, Contractor may propose changes by submitting a request for change to the Owner's Representative. In addition, Contractor may prepare a request for change due to the Contract resulting from a response to a Request for Information (RFI).
  - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 4. Include costs of labor and supervision directly attributed to the change.
  - 5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

6. Comply with requirements on Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- B. Proposal Request Form: Use AIA Document G709 for Proposal Requests or an approved alternate form.
- C. Owner-Initiated Proposal Requests: Architect through Owner's Representative will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Proposed Requests issued by Owner are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  2. Within time specified in Proposal Request, but not less than 20 days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributed to the change.
    - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

#### 1.5 CHANGE ORDER PROCEDURES

- A. Upon Owner's approval of a Proposal Request, Owner's Representative may issue a Change Order for signature of Owner and Contractor.

#### 1.6 CONSTRUCTION DIRECTIVE

- A. Owner-Initiated Construction Directive: Owner's Representative may issue a Construction Directive (CD). Construction Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. Construction Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Application for payment procedures.

1.02 RELATED SECTIONS

- A. General Conditions
- B. 01 33 00 - Submittal Procedures: Submittal requirements for the Schedule of Values.
- C. 01 78 00 - Closeout Submittals: Final application for payment.

1.03 APPLICATION FOR PAYMENT PROCEDURES

- A. Format of Periodic Estimate for Partial Payment: Use attached Periodic Estimate for Partial Payment form (included within the project manual) completed per instructions given during the pre-construction conference. An electronic version of the standard form may be prepared and used, subject to approval by the Owner.
  - 1. Coordinate preapproved quantities and percentages with the Owner **prior** to formal submittal of the pay request. Provide a **draft** copy of the application for payment for review as a basis for prior approval.
  - 2. Payment requests inconsistent with the preapproved quantities and percentages or that contain inaccuracies or errors, will be returned to the Contractor for correction and re-submittal.
- B. Submit the following items with two (2) signed copies of the application for payment, with each of the items signed by the Contractor:
  - 1. Project Schedule: arrow diagram (CPM) and tabulated schedules updated to show percentage completion of all work items in progress and current order of activities.
  - 2. Certify that Project Record Documents, including As-Builts and Submittals, are current.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Coordination Procedures
- B. Project Meetings
  - 1. Preconstruction Conference (by Owner)
  - 2. Site Mobilization Meeting (by Owner)
  - 3. Coordination Meetings (by Contractor)
  - 4. Pre-installation Meetings
  - 5. Monthly Progress Meetings (by Owner)
  - 6. Safety Meetings (see Section 01 41 00, Site Safety Requirements)
- C. Coordination of construction operations
- D. Key checkout procedures
- E. University Police Department Notifications: Alarm System Interruptions
- F. Utility Interruption Notifications
- G. Protection of Existing Facilities

1.02 RELATED DOCUMENTS AND REQUIREMENTS

- A. General Conditions

1.03 PROJECT COORDINATION PROCEDURE:

- A. The Owner shall be the Administrative Authority on this project and will issue all orders to the Contractor. The Architect/Engineer is responsible to the Owner for periodic architectural observation of the project. The Architect/Engineer is not authorized to make any changes in the Contract amount nor time for completion of the project. The Architect/Engineer may issue field memorandum to the Contractor for deficiencies in the work and for providing additional instruction and interpretation of the technical specifications and drawings. Any reference to Architect, Engineer, Contract Administrator, or any other related title shall be construed to be the designated representative as appointed by the Owner.

In pursuance of this contract, address all correspondence to the Owner's representatives in the following manner:

University of Alaska  
Facilities Planning and Construction  
Attn: Director  
Project Name and Number  
3890 University Lake Drive, Suite 110  
Anchorage, Alaska 99508-4669  
Telephone: 907.786.4900  
Fax: 907.786.4901  
E-mail: [uaa\\_fpc@alaska.edu](mailto:uaa_fpc@alaska.edu)

- B. The Architect/Engineer for this project is

Bezek Durst Seiser  
3330 C Street, Suite 200  
Anchorage, Alaska 99503  
Telephone: 907.562.6076

- C. Superintendence and Employees: In addition to General Condition, before starting work, the Contractor shall designate a competent authorized representative to represent and act for the Contractor, and shall inform the University in writing of the name and address of such representative, together with a clear definition of the scope of his authority to represent and act for the Contractor, and shall specify any and all limitations of such authority. Such representative shall be present or duly represented at the site of work at all times when work is actually in progress and, during periods when work is suspended, arrangements acceptable to the University shall be made for emergency work that may be required. The Contractor's authorized representative shall be supported by competent assistants, as necessary; and the authorized representative and his assistants shall be satisfactory to the University. All requirements, instructions and other Communications given to the authorized representative by the University shall be as binding if given to the Contractor.

None of the Contractor's superintendents, supervisors, or engineers shall be withdrawn from the work without due notice being given to the University; and no such withdrawal shall be made if it will jeopardize successful completion of the work.

The Contractor shall employ only competent and skilled men to perform any work. The Contractor shall be responsible for maintaining the orderly and faithful conduct of its employees.

The University may, in writing, require the Contractor to remove from the work any employee whom the University deems incompetent, careless, insubordinate, or otherwise objectionable or whose continued employment on the work is deemed by the University to be contrary to the University's interest.

The Contractor shall use local material, equipment, Subcontractors, and workers to the extent that they are reasonably available when, to do so, will not result in additional

expense to the Contractor.

#### 1.04 PRECONSTRUCTION CONFERENCE

- A. The Owner will schedule a preconstruction conference before construction starts, at a time convenient to the Owner and the Contractor, but no later than fifteen (15) days after execution of the Agreement. The conference will be held at the Project Site or another convenient location. The meeting will be conducted to review responsibilities and personnel assignments. The Owner will issue meeting minutes.
- B. Attendees: Authorized representatives of the Owner, Architect, and their sub-consultants; the Contractor and its Project Superintendent; major subcontractors; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project.
- C. Agenda: The Owner will prepare the agenda which may include the following items; (the Contractor may submit additional agenda items):
  - 1. Designation of responsible personnel
  - 2. Distribution of Contract Documents
  - 3. Procedures for processing field decisions and Change Orders
  - 4. Tentative construction schedule
  - 5. Critical work sequencing
  - 6. Submittal of Shop Drawings, Product Data, and Samples
  - 7. Critical work sequencing
  - 8. Preparation of record documents
  - 9. Procedures for processing Applications for Payment
  - 10. Weekly Coordination Meetings (Contractor)
  - 11. Monthly Progress Meetings (Owner)
  - 12. Use of the premises
  - 13. Parking availability
  - 14. Office, work, and storage areas
  - 15. Equipment deliveries and priorities
  - 16. Safety procedures
  - 17. First aid
  - 18. Security
  - 19. Sexual Harassment Sensitivity
  - 20. Housekeeping
  - 21. Working hours
- D. Meeting minutes: Owner, or the A/E under Owner direction, will document meeting; prepare and distribute meeting minutes within 48-hours of adjournment. Minutes will be typed, reflecting date, meeting number, list of attendees, and in a format to facilitate correction of previous meeting minutes. Distribution to be to all attendees and those affected by discussions or decisions made at meetings.

#### 1.05 SITE MOBILIZATION MEETING, by Owner

- A. Owner will schedule a meeting at the Project site prior to Contractor mobilization and

occupancy.

- B. Attendees: Authorized representatives of the Owner, Architect, and their sub-consultants; the Contractor and its Project Superintendent, Quality Control Representative, and Safety person; major subcontractors; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project.
  
- C. Agenda: The Owner will prepare the agenda, which may include the following items; (the Contractor may submit additional agenda items):
  - 1. Use of the premises by Owner and Contractor
  - 2. Parking availability
  - 3. Temporary utilities provided by Owner
  - 4. Office, work, and storage areas
  - 5. Equipment deliveries and priorities
  - 6. Safety procedures
  - 7. First aid
  - 8. Security
  - 9. Sexual Harassment Sensitivity
  - 10. Housekeeping
  - 11. Working hours
  - 12. Procedures for testing
  - 13. Procedures for maintaining record documents
  - 14. Requirements for start-up and commissioning
  - 15. Inspection and acceptance of equipment put into service during construction period
  
- D. Meeting minutes: Owner, or the A/E under Owner direction, will document meeting; prepare and distribute meeting minutes with 48-hours of adjournment.

Minutes will be typed, reflecting date, meeting number, list of attendees, and in a format to facilitate correction of previous meeting minutes. Distribution to be to all attendees and those affected by discussions or decisions made at meetings.

#### 1.06 COORDINATION MEETINGS, by Contractor

- A. Schedule and administer coordination meetings throughout progress of the Work at one-week intervals.
  
- B. Location: Arrangements made by the Contractor at site mutually agreed upon by Contractor and Owner.
  
- C. Attendance: Project Superintendent, major Subcontractors and Suppliers; Project Manager and others as appropriate to agenda topics for each meeting.
  
- D. Agenda: Prepare agenda with copies for participants. Contractor shall notify the Owner's representative of any requested agenda items a minimum of 24 hours prior to meetings. Minimum Agenda to include the following:

1. Review minutes of previous meetings
  2. Review of Work progress
  3. Field observations, problems and decisions
  4. Identification of problems which concern planned progress
  5. Status of progress schedule and adjustments thereto
  6. Planned progress during succeeding work period
  7. Coordination of projected progress
  8. Review of submittals schedule and status of submittals
  9. Pending changes and substitutions
  10. Review of off-site fabrication and delivery schedules
  11. Status of RFI's
  12. Maintenance of quality and work standards
  13. Furnish copies of Safety Meeting Reports
  14. Schedule and coordinate inspections
  15. Utility interruptions
  16. Other items affecting or relating to Work
- E. Meeting minutes: Contractor to document meeting; prepare meeting minutes and distribute within 24-hours of adjournment. Minutes will be typed, reflecting date, meeting number, list of attendees, and in a format to facilitate correction of previous meeting minutes. Distribution to be to all attendees and those affected by discussions or decisions made at meetings.

#### 1.07 PRE-INSTALLATION MEETINGS

- A. Conduct a pre-installation conference at the Project Site before each construction activity that requires coordination with other construction. Definable features of work that require a Pre-Installation Meeting are listed in Section 01 40 00, Appendix A.
- B. Attendees: The Installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Owner of scheduled meeting dates.
- C. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:
1. Contract Documents
  2. Options
  3. Related Change Orders
  4. Purchases
  5. Deliveries
  6. Shop Drawings, Product Data, and quality-control samples
  7. Review of mockups
  8. Possible conflicts
  9. Compatibility problems
  10. Time schedules

11. Weather limitations
  12. Manufacturer's recommendations
  13. Warranty requirements
  14. Compatibility of materials
  15. Acceptability of substrates
  16. Temporary facilities
  17. Space and access limitations
  18. Governing regulations
  19. Safety
  20. Inspecting and testing requirements
  21. Required performance results
  22. Recording requirements
  23. Protection
- D. Record significant discussions, agreements, and disagreements of each conference, and the approved schedule. Promptly distribute the record of the meeting to everyone concerned, including the Owner and the Architect.
- E. Do not proceed with the installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

#### 1.08 MONTHLY PROGRESS MEETINGS, by Owner

- A. The Owner may conduct a Progress Meeting a minimum of once each month to, among other things, review progress and arrive at approaches or solutions to problems.
- B. Attendees: Project Superintendent and other key Contractor personnel, and major Subcontractors and Suppliers; Project Manager and others as appropriate to agenda topics for each meeting.
- C. Agenda: Owner to prepare agenda with copies for participants. Owner's representative will notify the Contractor of any requested agenda items a minimum of 24 hours prior to meetings. Minimum Agenda may include the following:
1. Review minutes of previous meetings
  2. Review of Project Schedule, as submitted by Contractor
  3. Review of Periodic Estimate for Partial Payment
  4. Review Quality Control plan
  5. Review Safety Plan implementation
  6. Identify Owner-requested changes in scope of work
  7. Review Record Drawings
- D. Meeting minutes: Owner, or the A/E under Owner direction, will document minutes; prepare and distribute meeting minutes with 48-hours of adjournment. Minutes will be typed, reflecting date, meeting number, list of attendees, and in a format to facilitate correction of previous meeting minutes. Distribution to be to all attendees and those affected by discussions or decisions made at meetings.



#### 1.09 SAFETY MEETINGS

- A. The Contractor shall conduct a Safety Meeting at least once a month for all supervisors on the project to review past activities, to plan ahead for new or changed operations, and establish safe working procedures for anticipated hazards. An outline report of each meeting shall be submitted to the Owner.
- B. The Contractor shall ensure that a weekly Safety Meeting is conducted by field supervisors, safety and health representative, or foremen for all workers. Maintain and provide copies to the Owner of an outline report of meeting giving date, time, attendance, subjects discussed and who conducted it.

#### 1.10 COORDINATION OF CONSTRUCTION OPERATIONS

- A. Identification of Contractor key personnel: Within two weeks of the Contract award, submit names of key Contractor and Subcontractor personnel. Key personnel are considered to include the Contractor's Project Manager; Project Superintendent; on-site Quality Control Representative; and Safety and Health person. Provide the following information:
  - 1. Name and title
  - 2. Duties and responsibilities
  - 3. Resume describing experience and qualifications
  - 4. Personal and professional references
  - 5. Business address
  - 6. Phone numbers - day, cellular, fax and after hours' numbers
- B. Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work.
- C. Coordinate construction operations included in the Contract Documents to assure efficient and orderly installation of each part of the work. Coordinate the work of all the trades and subcontractors, including assigned subcontractors.
- D. Where necessary, provide memoranda for coordination of Owner supplied materials and equipment or Work performed by the Owner.

#### 1.11 KEY CHECKOUT PROCEDURES

- A. Obtain key authorizations from the Owner's representative.
- B. Pick up keys from the Owner's representative.
- C. Turn in keys prior to Contract Closeout. Contractor will be assessed a fee of \$500.00 for each lost key.

### 1.12 POLICE DEPARTMENT NOTIFICATION:

Notify the Owner's Representative a minimum of two (2) days prior to de-activating any fire detection or alarm system or any service to any building. The Owner's Representative will notify the Police Department. The Owner's Representative must also be notified when an alarm or detection system is reactivated. False alarms caused by the Contractor when proper notification has not been provided will result in a fine of no less than \$250. If fire engines and personnel are dispatched, the fine will be determined by the Anchorage Fire Department based on actual costs incurred.

### 1.13 UTILITY INTERRUPTION NOTIFICATIONS

- A. At least two weeks prior to the first outage, submit a schedule of all utility outages. Include proposed water, heat, gas, communications/data and electrical outages. The Contractor will not be bound by the entire schedule as originally submitted, but he will be expected to modify the schedule as required and, to the best of his ability, adhere to an accurate schedule as adjusted on a week-to-week basis.
- B. The University reserves the right to determine the schedule of all utility outages. In general, outages will not be scheduled during normal business hours in academic, research, or administrative facilities, nor during peak load periods in housing facilities.
- C. Specific written requests for utility system outages will be given as follows:
  - 1. Communications/Data links - 4 full working days
  - 2. Electrical and all other systems - 2 full working days.

## PART 2 PRODUCTS (Not Used)

## PART 3 EXECUTION

### 3.01 PROTECTION OF EXISTING FACILITIES

The Contractor shall include in its bid the cost to provide, and shall provide, the locating and protecting of the existing facilities of the Owner or any other public facilities whether or not such facilities be on the site of the work or in the public right-of-way.

- A. The Contractor will preserve and protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site of work which is not to be removed and which does not unreasonably interfere with the construction work. Care will be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place. Any lines or branches of trees broken during such operations or by the careless operation of equipment, or by workers, shall be trimmed with a clean cut and painted with an approved tree pruning compound as directed by the Contracting Officer.
- B. The Contractor shall be responsible for protection of the foundations from frost and subsequent heaving of foundations. The Contractor shall provide grading, drainage, compaction and interior heat as may be required to protect foundations from frost heave and freezing damage.

- C. The Contractor shall provide such temporary enclosures of the work and such space heating as may be required to protect work from damage due to freezing temperatures, snow, rain, and to allow orderly coordinated progress of all work.
- D. The Contractor will protect from damage all existing improvements or utilities at or near the site of the work, the location of which is made known to him, and will repair or restore any damage to such facilities resulting from failure to comply with the requirements of this contract or the failure to exercise reasonable care in the performance of the work. If the Contractor fails or refuses to repair any such damages promptly, the Contracting Officer may have the necessary work performed and charge the cost thereof to the Contractor.
- E. The Contractor shall coordinate the relocation of existing Public Utilities and associated infrastructure with the Municipality, Borough or Local Agencies.

END OF SECTION

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PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:

1. Preliminary Contractor Schedules
2. Contractors Construction Schedule.
3. Submittals Schedule.
4. Daily construction reports.
5. Material location reports.
6. Field condition reports.
7. Special reports.

- B. Related Sections include the following:

1. Division 1 Section 01 29 00 "Payment Procedures" for submitting the Schedule of Values.
2. Division 1 Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
3. Division 1 Section 01 33 00 "Submittal Procedures" for submitting schedules and reports,
4. Division 1 Section 01 40 00 "Quality Control" for submitting a schedule of tests and inspections.

1.03 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.
- B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.
- C. 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 Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

- E. Float: The measure of leeway in starting and completing an activity.
  - 1. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
  - 2. Total float is the measure of leeway in starting or completing an activity without element affecting the planned Project completion date.
- F. Major Area: A story of construction, a separate building, or a similar significant construction element.
- G. Milestone: A key or critical point in time for reference or measurement.
- H. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

#### 1.04 SUBMITTALS

- A. Submittal Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
  - 1. Scheduled date for first submittal.
  - 2. Specification Section number and title.
  - 3. Submittal category (action or informational).
  - 4. Name of subcontractor.
  - 5. Description of the Work covered.
- B. Preliminary Construction Schedule: Submit three opaque copies.
  - 1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loading activities.
- C. Contractor's Construction Schedule: Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
- D. Daily Construction Reports: Submit electronic copies at weekly intervals.
- E. Material Location Report: Submit electronic copies at monthly intervals.
- F. Field Conditions Report: Submit electronic copies at time of discovery of differing conditions.
- G. Special Reports: Submit electronic copies at time of unusual event.

#### 1.05 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, lists of subcontracts, Submittal Schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from parties involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

## PART 2 PRODUCTS

### 2.01 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
  - 1. Coordinate Submittals Schedule with list of subcontractors, the Schedule of Values, and Contractor's Construction Schedule.
  - 2. Initial Submittal: Submit within 15 days of the Notice to Proceed. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufactured or fabricated items.
    - a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
  - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

### 2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story 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 15 days, unless specifically allowed by Architect.
  - 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate

- activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
  4. Startup and Testing Time: Include not less than 30 days for startup and testing.
  5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architects and Owner's Representative administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
  2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
  3. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 1 Section "Summary." Delivery dates indicated stipulate the earlier possible delivery date.
  4. Work Restrictions: Show the effect of the following items on the schedule.
    - a. Coordination with existing construction.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Partial occupancy before Substantial Completion.
    - e. Use of premises restrictions.
    - f. Provisions for future construction.
    - g. Seasonal variations.
    - h. Environmental control.
  5. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
    - a. Submittals.
    - b. Mockups.
    - c. Fabrication.
    - d. Sample testing.
    - e. Tests and inspections.
    - f. Provisions for future construction.
    - g. Seasonal variations.
    - h. Environmental control.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notices to Proceed, Substantial Completion, and Final Completion, and the following interim milestones:
1. Phasing Milestones.
  2. Building enclosure (Dried-In)



- F. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.
1. Refer to Divisions 1 Section "Payment Procedures: for cost reporting and payment procedures.
  2. Contractor shall assign cost to construction activities on the CPM schedule. Costs shall not be assigned to submittal activities unless specified otherwise but may, with Architect's approval, be assigned to fabrication and delivery activities. Costs shall be under required principal subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training (if applicable), in the amount of 5 percent of the Contract Sum.
  3. Each activity cost shall reflect an accurate value subject to approval by Architect.
  4. Total costs assigned to activities shall equal the total Contract Sum.
- G. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis to demonstrate the effect of the proposed change on the overall project schedule.

#### 2.03 PRELIMINARY CONSTRUCTION SCHEDULES

- A. 60-Day Preliminary Schedule: Prior to any work conducted on-site a preliminary work schedule for the first 60 days of the planned activities, covering the initial work on-site. Schedule shall include mobilization, submittals, and all related start-up activities.
- B. Two (2) Week Look-Ahead Schedule: Contractor shall prepare a two (2) week look ahead schedule for coordination of work and review by the Owner's Representative. Submit this schedule in conjunction with the bi-weekly progress meeting, and continue this submittal throughout the duration of construction. Submit in Bar-Chart format.

#### 2.04 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. CPM Schedule: Prepare Contractor's Construction Schedule using a computerized, time-scaled CPM network analysis diagram for the Work.
1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 30 days after date established for the Notice to Proceed.
    - a. Failure to include any work item required for performance of the Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of schedule.
  2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
  3. Use "one workday" as the unit of time. Include lists of nonworking days and holidays

incorporated into the schedule.

- C. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities.
    - a. Preparation and processing of submittals.
    - b. Mobilization and demobilization.
    - c. Delivery.
    - d. Fabrication.
    - e. Utility interruptions.
    - f. Installation.
    - g. Work by Owner that may affect or be affected by Contractor's activities.
    - h. Testing and commissioning.
  2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
  3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
  4. Format: Mark the critical path. Locate the critical near center of network; locate paths with most float near the edges.
    - a. Sub-networks on separate sheets are permissible for activities clearly off the critical path.
- D. Initial Issue of Schedule: Prepare initial network diagram from a list of straight "early start-total float" sort. Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.
  2. Description of activity.
  3. Principal events of activity.
  4. Immediate preceding and succeeding activities.
  5. Early and late start dates.
  6. Early and late finish dates.
  7. Activity duration in workdays.
  8. Total float or slack time.
  9. Average size of workforce.
- E. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.

- 2.Changes in early and late start dates.
- 3.Changes in early and late finish dates.
- 4.Changes in activity durations in workdays.
- 5.Changes in the critical path.
- 6.Changes in total float or slack time.
- 7.Changes in the Contract Time.

## 2.05 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events ant Project site:
- 1.List of subcontractors at Project site.
  - 2.List of separate contractors at Project site.
  - 3.Approximate count of personnel at Project site.
  - 4.Equipment at Project site.
  - 5.Material deliveries.
  - 6.High and low temperature and general weather conditions.
  - 7.Accidents.
  - 8.Meetings and significant decisions.
  - 9.Unusual events (refer to special reports).
  10. Stoppages, delays, shortages, and losses.
  11. Emergency procedures.
  12. Orders and requests of authorities having jurisdiction.
  13. Change Orders received and implemented.
  14. Construction Change Directives received and implemented.
  15. Services connected and disconnected.
  16. Equipment or system tests and startups.
  17. Partial Completions and occupancies.
  18. Substantial Completions authorized.
- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reports plus items recently delivered. Include with list a statement of progress on the delivery dates form materials or items of equipment fabricated or stored away from Project site.
- C. Field Conditions Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation.

## PART 3 EXECUTION

### 3.01 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress of activities. Issue schedule before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  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 Actual Completion percentages for each activity.
- B. Distribution: Distribute copies of approved schedule to Architects, and Owner's Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
  2. When revisions are made, distribute updated schedules to the same parties and post in the same locations.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General submittal requirements
- B. Administrative Submittals
  - 1. Project Schedule
  - 2. Schedule of Values
  - 3. Submittal Schedule and Shop Drawing Record
  - 4. Contractor key personnel with afterhours contact numbers
  - 5. Certified payrolls
  - 6. Meeting minutes
  - 7. Safety Plan and Reports
- C. Certifications
- D. Shop Drawings, Product Data and Samples

1.02 RELATED SECTIONS

- A. General Conditions
- B. Section 01 29 00 - Payment Procedures
- C. Section 01 60 00 - Product Requirements and Substitutions
- D. Section 01 78 00 - Closeout Submittals

1.03 GENERAL SUBMITTAL REQUIREMENTS

- A. Review submittals for completeness and accuracy prior to submittal.
- B. Submit a minimum of six identical submittals for review and acceptance by the Owner **unless otherwise noted**. Five copies will be retained by the Owner; three copies will be returned to the Contractor with comments or approval.
- C. Submittals will be reviewed by the Owner and will be marked with one of the following:
  - 1. No Exceptions Taken: Submittal conforms with information given in the Contract Documents.
  - 2. Exceptions as noted: Submittal with the additional notations and corrections conforms with information given in the Contract Documents.
  - 3. Revise and Resubmit: Submittal is incomplete or does not conform with information given in the Contract Documents. Resubmit in accordance with notations and corrections.
  - 4. Rejected: Submittal is not in accordance with Contract Documents. Resubmit.

5. Information Only: Owner review of the submittal is not required. Owner will return submittal without review.

1.04 ADMINISTRATIVE SUBMITTALS: Submittal summary sheets are not required for administrative submittals.

- A. Schedule: Submit one pdf copy.
- B. Schedule of Values (Bid Breakdown): Coordinate items with the Project Schedule. Coordinate subcontracted work, assigned contracts and allowances. Submit one pdf copy.
- C. Submittal Schedule: Review the "Submittal Schedule and Shop Drawings Record" provided in this section for completeness against the original bid documents, add/delete submittal requirements required by addenda, and enter required submittal data. Submit one pdf copy.
  1. Method for numeral identification for tracking and filing submittals shall be as follows:
    - a. Submittal numbers shall coordinate with specification sections.
    - b. Each submittal shall have a submittal number, i.e. "02830-1".
    - c. If submittal numbers are added to the schedule, use the next submittal number in the appropriate section.
    - d. Re-submittals shall be numbered as "02830-1A".
  2. Substitutions SHALL be indicated as such in the "Remarks" column.
- D. Contractor key personnel: Submit one copy of names and other information, for key personnel within thirty (30) days of Notice-of-award.
- E. Contact Persons: Submit a list of emergency contact persons for the Contractor and Subcontractors, with normal-hours and after-hours phone numbers.
- F. Certified payrolls: Submit one copy of the certified payrolls to Alaska Department of Labor.
- G. Meeting minutes: Submit one copy of meeting minutes for meetings where the Contractor is identified as being responsible for that task. Submit meeting minutes to the Owner within 24-hours of the meeting.
- H. Submit one copy of the Project Superintendent name and experience record.

1.05 TEST REPORTS AND CERTIFICATIONS:

Submit one copy of test reports and certifications in accordance with this section and the individual technical section. Test reports and certifications will not be returned to the Contractor.

#### 1.06 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Submittals are required for all materials of construction and all equipment specified and/or indicated on the drawings. Additionally, any item that is incorporated in the project work, whether or not listed on the submittal schedule, shall be submitted for review and approval when so requested by the Owner. A list of minimum submittals required is provided in each section and summarized in the "Submittal Schedule and Shop Drawing Record". These lists are not necessarily complete or all-inclusive and the Contractor is responsible for reviewing and correcting the Submittal Schedule and Shop Drawing Record and for complete submittals. Include materials and equipment indicated on the drawings but not listed in the specifications in the submittal volume of the most closely related division.
- B. Coordinate submittals with requirements of work and of contract documents in such sequence to avoid delay in the work or work of other contracts. Submittals, which, in the opinion of the Owner, require examination with reference to other submittals not yet delivered may, at the Owner's discretion, not be examined until the undelivered submittals are received.
- C. Review submittal prior to transmission; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance and completeness of submittal with requirements of contract documents.
- D. The Contractor shall certify on the submittal that the information is complete and accurate and the proposed component service conforms to the contract. Failure to review and certify the submittal may be cause for the Owner to return the submittal without review.
- E. The Contractor shall maintain at the work site one (1) reviewed and corrected copy of each submittal arranged in accordance with the specification format. Failure to maintain current reviewed and corrected submittals may be cause for Owner to not accept partial pay requests.
- F. Do not fabricate products or begin work which requires submittals until the return of the submittal with the Owner's acceptance.

#### 1.07 BINDING/ORGANIZATION

- A. All electrical and mechanical submittals shall be bound in 3-ring slant "D" presentation ring binders, maximum 11-5/8" high and 11-1/4" deep. The spine, front and back shall be heavy virgin vinyl sealed over heavy board. The binders shall be provided with clear, full size pockets on the spine and front cover. The thickness of the contents shall not exceed 75% of the binder manufacturer's stated capacity.
- B. All binders shall be blue in color and clearly and permanently labeled on the spine with:

Project Name  
Project No.: \_\_\_\_\_  
Submittal, Volume \_\_\_ of \_\_\_

Division No(s): \_\_\_\_\_  
Building Name: \_\_\_\_\_  
Building No.: \_\_\_\_\_

All binders shall be clearly and permanently labeled on the front cover with the following:

Project Name  
Project No.: \_\_\_\_\_  
Contractor: (Name, address, phone number)  
Consultant:  
Submittal, Volume \_\_\_ of \_\_\_  
Discipline: \_\_\_\_\_  
Specification Division(s): \_\_\_\_\_  
Date: \_\_\_\_\_  
Building Name: \_\_\_\_\_  
Building No.: \_\_\_\_\_

- C. All pages shall be 8 1/2" x 11" or 11" x 17" folded to 8 1/2" x 11" in such a way as to permit unfolding without removal from the binder.
- D. The Electrical and Mechanical submittals shall be organized into the following five categories as a minimum:
  - 1. Division 15
  - 2. Division 16
  - 3. Direct Digital Controls (DDC)
  - 4. Fire Alarm
  - 5. Sprinkler System
- E. When separate volumes are required, the Contractor shall not separate a division into different volumes. (Exception: If a single Division binder would exceed 3 inches in width, it shall be further divided into multiple volumes.)
- F. Simultaneous submittal of all volumes is not required. Unless otherwise indicated, further division of the submittal into separate volumes is not permitted.
- G. Each volume shall contain the "Submittal Schedule & Shop Drawing Record" as an Index.
- H. Each volume shall be sequentially tabbed consistent with the Index, identified on both sides of the plastic index tabs on heavy stock divider sheets.
- I. Precede each item with a Submittal Summary Sheet (form provided by Owner). Each Submittal Summary Sheet shall be signed and dated by the Contractor to indicate review and compliance with specifications.

#### 1.08 PRODUCT DATA

- A. Submit only pages, which are pertinent; mark each copy of standard printed data to



identify pertinent products, referenced to specification section and paragraph number. Show reference standards, performance characteristics, and capacities; and required clearances.

- B. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the Work. Delete information not applicable.
- C. Material submitted shall indicate the specific item(s) proposed for this project.
- D. Marking of items shall be by means of a black arrow. Highlighting is not acceptable.

#### 1.09 SHOP DRAWINGS

- A. Present in a clear and thorough manner. Label each drawing with Owner project name and project number. Identify each element of drawings by reference to sheet number and detail, schedule, or specification number of contract documents.
- B. Shop drawings are required for any product which is not a standard commercial catalog product and which must be fabricated for or by the Contractor.
- C. Shop drawings shall be clear, precise and with sufficient detail that the product can be fairly evaluated by the engineer.
- D. The Contractor is responsible for the field fit and compatibility of the fabricated product. Identify field dimensions, show relationship to adjacent or critical features of work or products.
- E. Furnish physical and performance data, including materials, manufacturers' name, model numbers, weights, sizes, capacities, finishes, colors, accessories and other data required to completely describe equipment and to indicate compliance with specifications and drawings.
- F. Shop drawings shall include installation instructions.
- G. Shop drawings shall be submitted for all major deviations from design. Major deviations shall be determined by the Owner.
- H. Shop drawings shall be provided on transparencies, minimum 4-mil thickness. Drawing size shall be 8 1/2" x 11", 11" x 17", or 22" x 34".

#### 1.10 SAMPLES

- A. Submit full range of manufacturers' standard colors, textures, and patterns for selection by Owner. Do NOT submit samples that are not available. All samples become Owner's property; wiring and piping diagrams and controls; component parts; finishes; dimensions.

- B. Submit samples to illustrate functional characteristics of the product with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work.
- C. Include identification on each sample, giving full information.

#### 1.11 RESUBMITTALS

- A. Submit a minimum of six identical copies of the re-submittal for review and acceptance by the Owner. Three copies of each re-submittal will be retained by the Owner; three will be returned to the Contractor with comments or approval.
- B. Re-submittal to consist of three fully collated volumes plus five complete "inserts" to update the five volumes retained by Owner. Inserts to consist of complete submittal tab section, including an updated "Submittal Summary Sheet". All revisions for any one volume shall be resubmitted complete and at one time.
- C. Update the "Submittal Schedule & Shop Drawings Record" (Index) with each re-submittal. Include a complete summary of all changes and additions made to the equipment review submittal since the previous submittal. Only those items included in the summary will be reviewed with the resubmitted package.
- D. Each re-submittal of each volume shall be complete and shall contain all previously submitted material except that being replaced by new or revised material, which shall be removed. (Partial or improperly indexed or tabbed re-submittals shall be rejected without review or comment.)

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.01 INTRODUCTION

- A. The Contractor shall manage his operations in such a manner as to control the quality of all the work being performed to meet his obligation under the terms of this contract. He shall submit his Quality Control Plan for the system he proposes to use to effect this control within fifteen (15) days after the Notice of Award of the contract is received. Failure to have an accepted Quality Control Plan in place may be cause for the Owner to not accept the first Periodic Estimate for Partial Payment for execution. The plan shall include the personnel, facilities, methods and procedures he proposes to use, and a reporting system to document all inspections and tests. The findings of these inspections and tests and any actions resulting from them shall be included in the reports. No construction is to be started until the plan has been accepted, unless specific written authority is granted by the Owner's Representative. Acceptance is conditional and will be predicated on satisfactory performance during construction.

Any changes to the accepted plan, personnel, or procedures, desired by the Contractor, require the prior acceptance of the Owner's Representative. Change requests and acceptance must be in writing.

- B. Quality Control Coordination Meeting: Before start of work on the project, the Contractor shall meet with the Owner's Representative and discuss the Contractor's Quality Control System. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the Contractor quality control operations, control activities, testing, administration of the system for both on-site and off-site work, and the Owner's Quality Assurance Program. Minutes of the meeting shall be prepared by the Contractor within three working days and signed by both the Contractor and the Owner's Representative. The minutes shall become a part of the contract file. There may also be occasion when subsequent conferences will be called to reconfirm mutual understandings.

1.02 QUALITY CONTROL (QC) PLAN

- A. The QC Plan shall include as a minimum the following:
1. Description of the quality control organization, including lines of authority, responsibilities and coordinating procedures, of on-site/off-site quality control personnel, including those QC personnel not under direct control of the Contractor.
  2. List of personnel designated by the Contractor to accomplish the quality control functions required by the contract. The Contractor shall designate a specific on-site Quality Control Representative, and submit his qualifications with the QC Plan along with a copy of the letter of delegation that defines delegated duties, authority and responsibilities.
  3. Contractor's operational plan for accomplishing and reviewing work controls, fabrication controls, certifications, and documentation of quality control operations, inspections, and test records, including those for subcontractors. These provisions shall include the methods to be used during the procurement

cycle (order to delivery) for those materials or equipment that require source inspections, shop fabrications, or similar operations located separately from the work site.

4. Written statement of Quality Control Records describing procedures that will be implemented to achieve quality on the project. The QC Plan shall include an appendix with a copy of each checklist, form, report format, or similar record to be used in the implementation of the QC Plan.
5. Contractor's organization that handles construction contract activities.
6. Description of on-site personnel training.
7. Certification(s) of personnel, procedures, processes, and equipment.
8. Nondestructive testing requirements.
9. Identification of independent certifying and testing laboratories.

### 1.03 QUALITY CONTROL SYSTEM

- A. Contractor shall provide a Quality Control System encompassing: selection of construction materials and sources; suppliers; subcontractor's; on-site and off-site fabrication of contractor furnished assemblies; on-site and off-site assembly; erection; work procedures; workmanship; inspection; and testing.
- B. Contractor's Quality Control System shall provide documentation ensuring that quality provisions of contract schedule, specifications, and drawings have been performed.
- C. Contractor shall designate an individual within the on-site organization as the Quality Control Representative and the on-site manager of the Quality Control System.
- D. Control: Quality Control is the means by which the Contractor assures itself that its work complies with the requirements of the contract plans and specifications. Quality Control shall include at least three phases of control for all definable features of work. Definable features of the work for the project are attached as Appendix "A" to this Section.

<p>NOTE to Manager: identify definable features of work that require the three phases of control, and list in Appendix A at the end of this section.</p>
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1. Preparatory Phase: The Contractor shall be required to convene a preparatory phase meeting three (3) days prior to beginning any definable feature of work. It shall include a review of contract requirements; a check to assure that all materials and/or equipment have been tested; a check to assure that provisions have been made to provide required controls testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials, equipment, and sample work to assure that they conform to submittal data and that all materials and/or equipment are on hand. The Owner's Representative, or designee, shall be notified at least 48 hours in advance of beginning any of the required action of the preparatory phase. The results of the preparatory phase actions shall be documented by separate minutes prepared by the Contractor's Quality Control Representative and forwarded to the Owner's Representative. Subsequent to

the preparatory phase and prior to commencement of work, the Contractor shall instruct applicable workers as to the acceptable level of workmanship required in its Contractor Quality Control Plan in order to meet contract specifications.

2. Initial Phase: This phase starts as soon as a representative portion of the particular feature of work has been accomplished. This phase shall include a check of preliminary work, verify full compliance, establish level of workmanship, and resolve all difference. The Owner's Representative or designee shall be notified at least 24-hours in advance of beginning the initial phase of work. Separate records of this phase shall be prepared by the Quality Control Representative and furnished to the Owner's Representative.
3. Follow-up Phase: Frequent checks shall be performed to assure continuing compliance with contract requirements until completion of the particular feature of work. The checks shall be made a matter of record in the Quality Control documentation. Final follow-up inspections shall be conducted and all deficiencies corrected and documented.

#### 1.04 QUALITY CONTROL RECORDS

- A. Quality Control records shall be maintained at a central on-site location. Records shall include all quality control data; factory tests or manufacturer's certifications, quality control coordinating actions; records of quality control training/certifications, as well as routine hydrostatic, fire alarm, electrical continuity, grounding, welding, line cleaning, and similar tests. Quality Control records shall be available for examination by the Owner's Representative or designee. Periodic Estimates for Partial Payment may be withheld if the Owner determines that the Contractor has failed to maintain Quality Control records as required.
- B. Contractor shall provide on-site records of each inspection and test performed throughout the life of the contract. Records shall include, but not be limited to, completed checklists and forms and other factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved, identification of operators and inspectors, result of inspections or tests, nature of defects, causes for rejection, proposed remedial action, and corrective actions taken.
- C. Maintenance of quality control records shall not relieve the Contractor from submitting samples, test data, detail drawings, material certificates, or other information required by each section in the specification.
- D. Contractor shall ensure each record is identified and traceable to specific requirements in the specifications and drawings.
- E. Inspection records, test procedures, test results, and associated forms will be verified by the Owner's Representative or designee.

#### 1.05 SPECIAL INSPECTIONS

- A. Owner shall be responsible for all Special Inspections required by the Uniform Building

Code. Contractor may utilize an independent Special Inspector at no additional cost to the contract.

1.06 QUALITY ASSURANCE

- A. This program is the Owner's responsibility. Generally, the Owner will oversee the accepted Quality Control Plan to assure that it is being followed and properly implemented. Defects in the QC program shall be rectified immediately.

1.07 SEQUENCING AND SCHEDULING

- A. Contractor shall notify the Owner's Representative or designee at least 48 hours prior to scheduled inspection and tests.

PART 2 PRODUCTS (NOT USED).

PART 3 EXECUTION (NOT USED).

**APPENDIX A**

**Definable features of Work**

**Item No.: Technical Division: Description:**

1.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. This section establishes a **general** guide for preparation of the Contractors site safety work plan for this project. This guide is not intended to be inclusive of all necessary items to be included in the Contractors safety plan. In conjunction with these general requisite items, comply with all conditions of the pertinent provisions of federal OSHA safety standards and state specific standards adopted by the State of Alaska Department of Labor (ADOL). If there are any instances in this specification section that conflict or differ from those issued by the ADOL, ADOL will apply. This specification does not relieve the contractor in any way of any other reporting, documentation, verification, adherence or other requirements of the State of Alaska Dept. of Labor or federal OSHA standards.
- B. Safety of Contractor's employees and persons on site is and shall remain the sole responsibility of the Prime Contractor for this project.
- C. Related Sections:
  - 1. General Conditions

1.02 SUBMITTALS

- A. Submit at the time of the pre-construction conference the name and safety qualifications of the Contractor's safety and health person.
- B. Submit Contractor's written accident prevention plan within 14 days of Notice of Award and prior to commencement of any work on the site.
- C. Submit an outline agenda 5 working days preceding the supervisor's monthly safety meeting and meeting minutes within 5 days after the meeting.
- D. Submit outline report of weekly safety meeting within 5 working days after the meeting.
- E. Submit identified safety and health deficiencies and corrective measures weekly.
- F. Submit a copy of the Contractor's Lockout /Tagout procedures prior to implementation under this contract and in accordance with 29 CFR 1910.147(f)(2)(i). The purpose of this information is to educate UAA employees on the methodologies and equipment used by the contractor with regard towards hazardous energy control and isolation.

1.03 ACCIDENT PREVENTION AND SAFETY PLAN

- A. No person shall be required to work in surroundings or under working conditions which are unsafe or dangerous to his/her health.
- B. The Contractor shall be responsible for initiating and maintaining a safety and health

program, which will comply with the standards adopted by ADOL.

- C. Prior to commencement of work at a job site and no later than 14 days after Notice of Award of contract, an acceptable accident prevention plan written by the prime contractor for the specific work and implementing in detail the pertinent requirements of the OSHA, will be reviewed for information only by the Owner. On contract operations, the contractor's plan will be job specific and will include work to be performed by subcontractors, and measures to be taken by the contractor to control hazards associated with materials, services, or equipment provided by suppliers. Consideration will also be made to cover the prevention of alcohol/drug abuse on the job.
- D. The accident prevention plan shall provide for frequent and regularly scheduled safety inspections of the work sites, material, and equipment by the competent person. Identified safety and occupational health deficiencies and corrective measures shall be recorded and forwarded to the Owner weekly.
- E. Each individual employee is responsible for complying with applicable safety requirements, wearing prescribed safety equipment, and preventing avoidable accidents and property damage.

#### 1.04 INSTRUCTION AND TRAINING

- A. Each employee shall be provided initial instruction and such continued safety training to enable them to perform their work in a safe manner.
- B. Base instruction and training on the safety program of the contractor or university agency and shall include, but not be limited to:
  - 1. General safety policy.
  - 2. Requirements for employee and project safety.
  - 3. Employee's responsibilities for property and safety of others.
  - 4. Employee's responsibilities for reporting all accidents.
  - 5. Medical facilities and required treatment.
  - 6. Procedures for reporting or correcting unsafe conditions or practices.
  - 7. Safe clearance procedures.
  - 8. Firefighting and other emergency procedures.
  - 9. Job hazard and activity hazard analyses and accident prevention plan.
  - 10. Alcohol/drug abuse policy.
  - 11. Segregation of vehicular and pedestrian traffic.
- C. Provide further instruction and training sessions as required by the ADOL or OSHA for specific job tasks. Notify the Owner a minimum of three (3) working days in advance of the training so that they may attend.



### 1.05 ON THE JOB

- A. Designate, to cover all hours of work at the project site(s), at least one competent or qualified safety and health person on site to manage the Contractor's Safety Program. The principal safety and health person shall report to and work directly for the contractor's top on-site manager, corporate safety office, or other high-level official of equivalent position. The safety and health person(s) shall have the authority to take immediate steps to correct unsafe or unhealthful conditions. The employment of a safety and health person(s) shall not abrogate the safety and health responsibilities of other personnel. This safety and health person shall be intimately familiar with and be responsible for direct input on the generation of the Contractor's written accident prevention plan. The safety and health person shall be the point of contact with the Owner for all matters regarding job site safety.
- B. A "Competent" or "Qualified" person means one who can identify existing and predictable hazards in the working environment which are dangerous to personnel and has the authority to promptly eliminate them. This person is one who, by degree, certificate, professional standing, or extensive knowledge, training and experience has demonstrated his/her ability to resolve safety problems related to the work site.
- C. Hold regularly scheduled safety meetings at least once a month for all supervisors on the project to review past activities, to plan ahead for new or changed operations, and establish safe working procedures for anticipated hazards. An outline report of each meeting shall be submitted to the Owner.
- D. Hold at least one safety meeting weekly conducted by field supervisors, safety and health representative, or foremen for all workers. Maintain and provide copies to the Owner of an outline report of meeting giving date, time, attendance, subjects discussed and who conducted it.

### 1.06 ACCIDENT REPORTING AND RECORDKEEPING

- A. All accidents which occur incident to an operation, project, or facility shall be immediately reported to the Owner.

On contract operations, the prime contractor shall be responsible for recording and reporting all accident exposure and experience incident to the work. (This includes exposure and experience of the prime contractor and of his subcontractors.) As a minimum, these records shall include exposure work-hours and a log of occupational injuries and illnesses. All injuries and diagnosed occupational illnesses that result in a fatality or lost workday shall be reported to the Owner.

Part 2 PRODUCTS (Not Used)

Part 3 EXECUTIONS (Not Used)

END OF SECTION

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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Power, Water, and Heat
- B. Temporary Utilities
- C. Temporary Enclosures and Space Heating
- D. Parking
- E. Pedestrian and Vehicle Traffic Control and Safety
- F. Storage

1.02 RELATED DOCUMENTS AND REQUIREMENTS

- A. General Conditions and Special Conditions

1.03 POWER, WATER, AND HEAT (PAID BY OWNER)

- A. Electricity and water required for the performance of this Contract will be made available at no cost to the Contractor. The Owner cannot guarantee the point of connection to be in close proximity to the site of the work.
- B. All temporary water connections, power connections, pipe, hose, cables, cords, etc., shall comply with current OSHA standards and pertinent safety directives and will be supplied and maintained by the Contractor. Provide all equipment, materials, and labor to connect, maintain, and disconnect temporary service.
- C. Provide temporary equipment and fuel (if required) of sufficient number and size to maintain the temperature and ventilation requirements for Work, or a minimum temperature of 50 °F, whichever is higher.
- D. Electric heaters are not permitted.
- E. Non-vented or open flame heating/ventilating equipment are not permitted.
- F. Conservation efforts must be exercised when utilizing Owner's water and power. If excessive waste is apparent, the use of Owner supplied utilities will be curtailed.

1.04 TEMPORARY OPERATION OF FACILITY'S NEW AND EXISTING MECHANICAL SYSTEMS

- A. The facility's new and existing mechanical systems may be utilized for temporary heat and ventilation. The system or parts of the system utilized shall be complete in all respects prior to consideration of use.

- B. Install indicated filters in all air-handling equipment, including cabinet unit heaters, placed in operation during construction. Install new filters during air balancing and again before acceptance of substantial completion by the Owner. The filters installed at the time of acceptance of substantial completion by the Owner may be those that were used during the air balancing process if these filters are removed once the balancing has been completed and the construction filters are reinstalled.
- C. Install temporary one (1) inch thick roll filter media over all return and exhaust air intake grills and openings and over all fan intakes. Change filters as required and leave in place until the rooms or areas receive final cleaning for inspection.
- D. When each piece of equipment is initially placed in service measure the motor current draw. If it exceeds the nameplate amperage (not service factor amperage), adjust fan and/or motor sheaves or pump balancing cocks to bring motor current draw below the full load current rating. If that is not possible, stop operation and notify the Owner.
- E. Test, clean, and flush liquid systems prior to utilization.
- F. Clean, repair, and lubricate piping, ductwork, equipment and accessories as required to return the systems to like new condition prior to substantial completion.
- G. The Contractor retains all responsibility for providing required maintenance until acceptance of substantial completion by the Owner. Fuel and power consumed during temporary use of the facility's new mechanical systems will be paid for by the Owner. Take steps to conserve energy.

#### 1.05 TEMPORARY UTILITIES

- A. Temporary Ventilation: Provide temporary ventilation of enclosed areas to cure materials, to disperse humidity, and to prevent accumulation of dust, fumes, vapors and gases.
- B. Site Lighting: Provide site lighting as required.
- C. Construction Area Lighting – Provide general construction area lighting wherever work is in progress and wherever lighting is required for the safety of any person employed on the site.
- D. Toilets and Sewage Disposal: There is no toilet or utility available on the site or available from the Owner. The Contractor shall include in its bid the cost of providing, and shall provide, all necessary toilets, including the cost of maintaining and cleaning them and dispensing of the effluent, and shall provide such toilets to all personnel on the site. All sewage from whatever source shall be disposed of through the public sewage collection system, if available, or shall be discharged into holding tanks and then hauled from the site. The effluent from toilets shall not be discharged onto or into the ground.
- E. Telephone: There is no telephone service available on the site or available from university facilities. The Contractor shall include in its bid the cost of providing, and

shall provide, a separate single-party, non-coin operated telephone in his on-site office. Such telephone service shall be available until the work is completed. Each party using a telephone shall pay his own toll charges.

1.06 TEMPORARY ENCLOSURES AND SPACE HEATING:

Provide such temporary enclosure of the work and such space heating as may be required to protect the work from damage due to freezing temperatures, snow, rain and wind and to allow orderly, coordinated progress of work.

1.07 PARKING

The Contractor and his employees may park their vehicles in the University parking areas, on a space available basis. There will be no authorized parking in fire lanes and delivery lanes unless authorized by the Owner and then only for loading and unloading materials and debris for and from the project.

1.08 PEDESTRIAN AND VEHICLE TRAFFIC CONTROL AND SAFETY

- A. The Contractor shall include in its bid the cost to provide, and shall provide, such barricades, signaling devices, signalmen, temporary signs, and all other facilities as may be necessary or required to control and/or accommodate pedestrian and vehicular traffic through or around the work of the Contractor on the campus or other property of the Owner.
- B. The Contractor shall erect firm barricades around work on the campus or other property of the Owner restricting pedestrian traffic from the area. Lath and light plastic flagging are not acceptable. All materials of construction shall be within the barricades so established by the Contractor or the storage area assigned to him.
- C. The Contractor shall protect building entrances from overhead dangers.

1.09 STORAGE

- A. Site and Off-Site Storage: the Contractor shall include in its bid the cost to provide, and shall provide, such special security measures and warehousing as may be necessary to accomplish the work for which he is contractually responsible.

END OF SECTION

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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Product delivery, storage and handling
- B. Product list submittal
- C. Substitution requests

1.02 RELATED DOCUMENTS AND REQUIREMENTS

- A. UA General Conditions
- B. Section 01 33 00 - Submittal Procedures
- C. UAA Forms – Substitution Request

1.03 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.
- B. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
- C. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damage, or sensitive to deterioration, theft, and other losses.
- D. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- E. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- F. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
- G. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
- H. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation  
Maintain temperature and humidity within range required by manufacturer's instructions.

1.04 SUBSTITUTION REQUESTS

- A. Substitutions will only be considered after bid opening when deemed by the Owner to be in its sole interest. The Substitution Request Form is to be submitted for Owner consideration prior to inclusion in the formal submittal process. Include the following information:
1. Complete technical data and information to indicate product provides performance that will meet the specification.
  2. Indicate if design changes will be required to incorporate product into the Work.
  3. Impacts on other trades.
  4. Cost proposal indicating cost savings.
- B. The Owner will consider the request for substitution and advise the Contractor if the proposed substitution is accepted for formal submittal review. Items accepted will then be reviewed for technical compliance in the formal submittal review process. Substitutions will only be considered when submitted on the provided Substitution Request Form.
- C. Substitutions SHALL be indicated as "Substitution" in the remarks column on the Submittal Schedule and Shop Drawing Record.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION



PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Land surveying
- B. Project layout

1.02 RELATED DOCUMENTS AND REQUIREMENTS

- A. General Conditions and Special Conditions
- B. 01 33 00 - Submittal Procedures
- C. 01 78 00 - Closeout Submittals

1.03 SUBMITTALS

**Final Property Survey: Prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the surveyor, that principal metes, bounds, lines and levels of the Project are accurately positioned as shown on the survey.**

1.04 QUALITY ASSURANCE

- A. Surveyor Qualifications: Engage a land surveyor registered in the State of Alaska to perform required land-surveying services and construction surveying.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 EXAMINATION

- A. Identification: The Owner will identify existing control points and property line corner stakes.
- B. Verify layout information shown on the Drawings in relation to the property survey and existing benchmarks before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
  - 1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
  - 2. Promptly replace lost or destroyed Project control points. Base replacements on the original survey control points.

- C. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities and other construction.
  - 1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping.

### 3.02 PERFORMANCE

- A. Work from lines and levels established by the property survey. Establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.
  - 1. Advise entities engaged in construction activities of marked lines and levels provided for their use.
  - 2. As construction proceeds, check every major element for line, level and plumb.
- B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference.
  - 1. Record deviations from required lines and levels, and advise the Owner when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.
- C. Site Improvements: Locate and lay out site improvements including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels, and control lines and levels required for mechanical and electrical work.
- E. Final Property Survey: Prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the surveyor, that principal metes, bounds, lines and levels of the Project are accurately positioned as shown on the survey.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General Requirements
- B. Structural Work
- C. Operating Systems
- D. Visual Requirements
- E. Existing Warranties

1.02 RELATED DOCUMENTS

- A. General Conditions and Special Conditions

1.03 GENERAL REQUIREMENTS

- A. Repairs and Patching: The Contractor shall repair or patch all areas as required by his demolition and/or moving of materials and equipment. All patching and repairs shall match adjacent areas in texture, color, materials, and quality of workmanship. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the work.
- B. SUBMITTALS
  - 1. Cutting and Patching Proposal: Submit a proposal describing procedures well in advance of the time cutting and patching will be performed if the Owner requires approval of these procedures before proceeding. Request approval to proceed. Include the following information, as applicable, in the proposal:
    - a. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
    - b. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
    - c. List products to be used and firms or entities that will perform Work.
    - d. Indicate dates when cutting and patching will be performed.
- C. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
- D. Structural: Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of

reinforcement with the original structure.

- E. Roofing, Exterior Systems: When existing is under warranty, Owner to obtain written approval under the warranty, based on the submittal prepared by the Contractor. Work shall be performed by an authorized installer.
- F. Approval by the Owner to proceed with cutting and patching does not waive the Owner's right to later require complete removal and replacement of unsatisfactory work.

#### 1.04 STRUCTURAL WORK

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
- B. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
  - 1. Foundation construction.
  - 2. Bearing and retaining walls.
  - 3. Structural concrete.
  - 4. Structural steel.
  - 5. Lintels.
  - 6. Timber and primary wood framing.
  - 7. Structural decking.
  - 8. Stair systems.
  - 9. Miscellaneous structural metals.
  - 10. Exterior curtain-wall construction.
  - 11. Equipment supports.
  - 12. Piping, ductwork, vessels, and equipment.
  - 13. Structural systems of special construction in Division 13 Sections.
- C. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

#### 1.05 OPERATIONAL SYSTEMS

- A. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
  - 1. Primary operational systems and equipment.
  - 2. Air or smoke barriers.
  - 3. Water, moisture, or vapor barriers.
  - 4. Membranes and flashings.

5. Fire protection systems.
6. Noise and vibration control elements and systems.
7. Control systems.
8. Communication systems.
9. Conveying systems.
10. Electrical wiring systems.
11. Operating systems of special construction in Division 13 Sections.

1.06 VISUAL REQUIREMENTS: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the **Owner's** opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.

A. If possible retain the original installer or fabricator to cut and patch the exposed Work listed below. If it is impossible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.

1. Processed concrete finishes.
2. Stonework and stone masonry.
3. Ornamental metal.
4. Matched-veneer woodwork.
5. Preformed metal panels.
6. Fire-stopping.
7. Window wall system.
8. Stucco and ornamental plaster.
9. Acoustical ceilings.
10. Terrazzo.
11. Finished wood flooring.
12. Fluid-applied flooring.
13. Carpeting.
14. Aggregate wall coating.
15. Wall covering.
16. Swimming pool finishes.
17. HVAC enclosures, cabinets, or covers.

1.07 WARRANTY

A. Existing Warranties: Replace, patch and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing. Roofing work shall be done by an installer authorized by the entity issuer.

PART 2 PRODUCTS

2.01 Materials, General: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical

materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

### PART 3 EXECUTION

#### 3.01 INSPECTION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

1. Before proceeding, meet at the 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.

#### B. PREPARATION

1. Temporary Support: Provide temporary support of work to be cut.
2. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
3. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
4. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

#### C. PERFORMANCE

1. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
2. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
3. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible review proposed procedures with the original installer comply with the original installer's recommendations.
4. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to the size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
5. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
6. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.

7. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating and backfilling.
8. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after bypassing and cutting.
9. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
10. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
11. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching refinishing.
12. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials if necessary, to achieve uniform color and appearance.
13. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
14. Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

D. CLEANING

1. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION

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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Environmental Requirements
- B. Dust Control and Road, Sidewalk Cleanup
- C. Work Site Clean-Up/Occupied Building
- D. Work Site Clean-Up

1.02 RELATED DOCUMENTS AND REQUIREMENTS

- A. General Conditions and Special Conditions

1.03 ENVIRONMENTAL REQUIREMENTS

The Contractor shall include in its bid the cost of complying, and shall comply, and shall require each of its Subcontractors to comply, with this section and all Local, State, and Federal Environmental Law and Regulation.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 DUST CONTROL AND ROAD, SIDEWALK CLEANUP

- A. The Contractor shall be responsible for dust control on the project site. The Contractor is responsible to prevent dust being generated from his operation to enter into any part of the existing facility. The only allowable exception is the area on the construction site of any temporary dust proof partitioning.

Should the site produce visible dust, the Contractor shall, when directed by the Owner, forthwith, apply a palliative, which prevents the dust from drifting or being wind-driven off the site.

- B. The Contractor shall be responsible for dust control on all roads used by the Contractor and dust control on the project site. Frequent watering may be necessary to comply with this requirement.

- 1. In addition, sweep and clean roadways and sidewalks of dirt and debris immediately after any construction operation. In the event it rains before this can be performed, walkway shall immediately be washed clean. Roadways with six (6) feet or more of ditch or shoulder dirt may be swept without pickup. On roadways with less than six (6) feet of shoulder and ditch or where there are curbs, the dirt shall not be projected off the road but shall be picked up and the roadway left clean. Any major spill of earthwork, concrete or debris shall be

immediately picked up from all roadways and the roadway cleaned.

2. No liquids may be discharged on sidewalks, parking lots, roadways, or lawns in winter or any other time without the express approval of and in accordance with methods prescribed by the Owner. Liquids of a toxic or flammable nature shall be contained and disposed of in accordance with laws governing their disposal. The Contractor shall be responsible for the immediate clean up of any liquid discharge to the requirements herein set forth.

### 3.02 WORK SITE CLEAN UP of an OCCUPIED BUILDING

- A. Clean up frequently and as often and in such a manner as the Owner shall direct. If the Contractor fails to maintain an orderly construction site, the Owner may cause the clean up to be performed by others and back charge the cost of the clean up to the Contractor. The building will be occupied during the duration of construction.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Starting systems.
- B. Demonstration and instructions.
- C. Testing, adjusting, and balancing.

1.02 RELATED SECTIONS

- A. Section 01 77 00 - Closeout Procedures: System operation and maintenance data and extra materials.

1.03 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Owner of schedule seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or for other conditions which may cause damage.
- D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

1.04 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel two weeks prior to date of Substantial Completion.
- B. In a classroom environment located at the Project site, demonstrate and provide

instruction for the Project equipment by a manufacturer's representative who is knowledgeable about the Project.

- C. For equipment or systems requiring seasonal operation, schedule demonstration for other season(s). Demonstration to occur within nine months.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at equipment location.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Substantial Completion inspection requirements
- B. Instructions to Owner
- C. Replacement Materials
- D. Final cleaning
- E. Final inspection requirements

1.02 RELATED DOCUMENTS AND REQUIREMENTS

- A. General Conditions and Special Conditions
- B. 01 78 00 - Record Documents; Operation and Maintenance Manuals; Warranties

1.03 SUBSTANTIAL COMPLETION INSPECTION REQUIREMENTS

- A. Closeout requirements for specific construction activities are included in Sections in Divisions 2 through 16.
- B. Before requesting a Substantial Completion inspection complete the following:
  - 1. Approved Operation and Maintenance Manuals in accordance with Section 01 78 00.
  - 2. Updated Project Record Documents in accordance with Section 01 78 00.
  - 3. Electrical, mechanical and life safety systems are in place, balanced, tested, commissioned, and accepted for proper operation.
  - 4. Complete training and instruction of Owner's personnel.
  - 5. Deliver replacement materials, spare parts and similar items.
  - 6. Make final changeover of permanent locks and transmit keys to Owner.
- C. Submit a request in writing that the work is Substantially Complete and available for inspection at least ten (10) days prior to the desired date of the inspection. Include a detailed list of uncompleted items and the schedule for their completion.

1.04 INSTRUCTIONS TO OWNER

The Contractor will instruct the Owner or the maintenance personnel of the Owner in the operation and maintenance of all equipment prior to substantial completion. This will include actual demonstration of operation and written instructions.

1.05 FINAL CLEANING

- A. General: The General Conditions require general cleaning during construction.
- B. Clean all surfaces in accordance with manufacturer's recommendations.
- C. Complete the following items prior to Final Inspection:
  - 1. Remove labels that are not permanent labels.
  - 2. Clean mirrors and glass in doors and windows.
  - 3. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Leave concrete floors broom clean. Vacuum carpeted surfaces.
  - 4. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
  - 5. Clean the site, including landscape development areas, temporary facilities locations, and staging areas. Sweep paved areas broom clean; remove stains, excess concrete, and other foreign deposits.

1.06 FINAL INSPECTION REQUIREMENTS

- A. Submit the following prior to Final Inspection:
  - 1. Approved Project Record Documents.
  - 2. Waiver of Release and Liens (forms provided)
  - 3. Consent of Surety to Final Payment (form provided)
  - 4. Final Application for payment.
- B. Remove temporary facilities and controls.
- C. Submit a written request for final inspection ten (10) days prior to the desired date for final inspection. Written request to certify that all items identified for correction during the Substantial Completion inspection have been corrected, and must be accompanied by an item for item list documenting each punch list item is corrected.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents
- B. Operation and maintenance manuals submittal requirements.

1.02 RELATED DOCUMENTS

- A. General Conditions and Special Conditions
- B. Section 01 77 00 - Closeout Procedures

1.03 PROJECT RECORD DOCUMENTS

Make and maintain the following records of the as-built condition of the project:

- A. One complete set of conformed specifications and one complete set of conformed drawings on which all changes of materials, equipment, or dimensions shall be recorded and kept current on a daily basis. Include the entire scope of the project, including the work of all subcontractors. No work is to be permanently concealed until required as-built information has been recorded.
- B. Drawing notations are to be orderly, neat and legible, of quality sufficient for photocopying, and shall include as a minimum:
  - 1. applicable contract Change Orders (CO's)
  - 2. applicable design clarifications/corrections (RFI's)
  - 3. field changes of dimension and detail
  - 4. details not in original contract drawings
  - 5. location of all valves and sensors with appropriate tag identification
  - 6. measured depths of elements of foundation in relation to finish first floor datum
  - 7. measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements
  - 8. measured locations of internal utilities and appurtenances concealed in construction, references of visible and accessible features of constructions
- C. The as-built drawings are to be available to the Owner at all times for review or duplication. The Owner may elect to inspect the record documents on a weekly or an as-needed basis.
- D. Progress payments may be withheld if the Owner determines that the Contractor has failed to keep the as-built drawings as specified.
- E. Before backfilling of buried work the Contractor shall record the as-built condition describing the type, dimensions, and horizontal and vertical locations of all buried work, including piping, conduits, and foundations.

- F. As a condition precedent to receiving periodic payment, the contractor shall furnish an as-built drawing of buried work satisfactory to the Owner and certified by the Contractor. The drawing shall be referenced to the as-built project lines and shall include buried work both inside and outside building lines.
- G. Two weeks prior to substantial completion inspection, submit as-built drawings to the Owner for review.

1.04 OPERATION AND MAINTENANCE MANUALS

- A. General Requirements, in addition to information required in General Condition 38 and 41:

- 1. Submit one copy of draft volumes. Revise content of documents and resubmit within 10 days of receiving draft copy with comments. Provide a .pdf version of the volumes on CD-ROM or DVD disk.
- 2. All O&M manuals shall be bound in 3-ring slant "D" presentation ring binders, maximum 11-5/8" high and 11-1/4" deep.
- 3. All binders shall be black in color and clearly labeled on the spine with project name and number, building and volume, and all of the following on the front cover:

PROJECT NAME  
Project No.: ##-####  
Building Name: \_\_\_\_\_  
Building No.: \_\_\_\_\_  
Contractor: (Name, address, phone number)  
Consultant: \_\_\_\_\_  
Operational and Maintenance Manual, Volume \_\_\_ of \_\_\_  
Discipline: \_\_\_\_\_  
Date: \_\_\_\_\_

- 4. All pages shall be 8 1/2" x 11" or 11" x 17" folded to 8 1/2" x 11" in such a way as to permit unfolding without removal from the binder.
- 5. The manuals shall be organized into the following **six** categories:
  - a. Divisions 2 through 13
  - b. Division 14 through 16
- 6. When separate volumes are required, Contractor shall not separate a division into different volumes unless a single division binder would exceed 3 inches in width; that division may be in multiple volumes.
- 7. Each volume shall contain a directory listing names, addresses and telephone number of:
  - a. Contractor
  - b. Subcontractor



- c. Suppliers
  8. Each volume shall contain an Index giving:
    - a. Tab Number
    - b. Contents
    - c. Specification Reference
  9. Each volume shall be sequentially tabbed consistent with Index Tab Number and contents, identified on both sides of the plastic tab.
  10. Precede each item with an O&M Data Sheet.
  11. Each O&M Data Sheet shall be signed and dated by the Contractor.
- B. Architectural Materials and Finishes
1. For each item provide (on O&M Data Sheet) names, addresses and telephone numbers of suppliers providing guarantee or warranty service and source of replacement part.
  2. Building products, applied materials and finishes: Include product data, with catalog number, size, composition, color, and texture designations. Provide information for re-ordering custom manufactured products.
  3. Instructions for care and maintenance: Include manufacturer's recommendation for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
  4. Moisture-protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance and repair.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Conditions of contract, including Special Conditions and other Divisions of these Specifications, apply to work of this section.

1.02 DEFINITION

- A. Building Commissioning work is a joint team effort to ensure that all equipment and systems have been completely and properly installed and put into service. The commissioning work will begin only after all systems are 100% complete and functional. The factory startup of all equipment must have been carried out as well as control system completion, startup, and balancing. The team is made up of representatives for the Owner's, Engineer's and Contractor's organizations.

- B. The Contractor shall schedule system commissioning. The trades represented during the commissioning include sheet metal, piping and fitting, refrigeration, controls and balancing. The lead tradesmen for each trade who actually performed the work is to be present. All trades are to be present as scheduled during the commissioning sessions. The balancing and control contractors may be released when their portions of work have been completed. The Contractor will submit a schedule of activities for commissioning at least 30 (thirty) days prior to beginning commissioning. A suggested schedule outline is as follows:

1. Day One (Monday) Contractor, Owner and Engineer; Mechanical Subcontractor optional.
2. Day Two (Tuesday) Contractor, Owner, Engineer, Balancing Subcontractor, Control Subcontractor and Mechanical Subcontractor.
3. Day Three (Wednesday) Contractor, Owner, Engineer, Balancing Subcontractor, Control Subcontractor, Mechanical Subcontractor, including Sheet Metal Subcontractor and Fitter.
4. Day Four (Thursday) Contractor, Owner, Engineer, Mechanical Subcontractor, Sheet Metal Subcontractor, Fitter and Refrigeration Subcontractor.
5. Day Five (Friday) Refrigeration Subcontractor and all parties from day four to complete tasks not completed previously.

1.03 DOCUMENTS

- A. The following documents shall be assembled and bound into the operating and maintenance manuals and delivered according to Section 01780, Maintenance Data.

1. Plumbing sanitization certified.
2. Certificates of Completion from the following Subcontractors:
  - a. Sheet Metal
  - b. Plumbing and Piping
  - c. Automatic Temperature Control
  - d. Refrigeration

- e. Fire protection
  - (i) Balancing report including duct pressure test.
  - (ii) Hydronic system water analysis report.
- 3. All operating and maintenance data as described in Section 01780.
- B. Record Drawings will be submitted to Owner according to Section 01780, Contract Closeout.

#### 1.04 SCOPE OF WORK

- A. The work included under this section includes a complete and thorough investigation of all systems in order to ensure proper installation and operation of all components and systems. The following systems shall be evaluated:
  - 1. Automatic temperature controls
  - 2. Instrumentation (gauges, thermometers, etc.)
  - 3. Air handling equipment
  - 4. Air distribution and exhaust systems
  - 5. Hydronic heating and steam distribution systems
  - 6. Refrigeration equipment
  - 7. Fire protection
  - 8. Fire Alarm Systems
  - 9. Public Address / Clock system
  - 10. Labeling, marking and color coding

### PART 2 PRODUCTS

#### 2.01 VALVE TAGS

- A. Tag all valves with round, numbered, \_\_\_- inch (give Size) brass tags. Fasten to valve stem with beaded chain. In boiler room and fan room, provide a framed, typewritten directory under glass. Directory shall list all valve tag numbers, service of valve, system valve is located in, location of valve and whether valve is normally open or closed. Provide a separate tag sequence for each service. Each service prefix to be abbreviation used for that service (Sprinkler, S-1, S-2, etc.; Air, A-1, A-2, etc.)

#### 2.02 EQUIPMENT LABELS

- A. Label all equipment with heat resistant, laminated plastic labels having engraved lettering 1/2-inch high and fastened in place with rivets, screws or pressure-sensitive, double sided tape, on back of label. Examples "Pump P-1", "Water Heater No. 1", "Exhaust Fan Ref-2", "Air Handling Unit AHU-1", etc.

#### 2.03 PIPING LABELS

- A. Label all service piping with adhesive backed, flexible, vinyl labels, sealed in clear polyester film. Secure labels with directional flow adhesive vinyl banding tape. Labels and tape to comply with ANSI A13.1-1981 for color and size.

- B. Manufacturer: Baker, Emed, Setmark, Seton.

#### 2.04 WATER TREATMENT CHEMICALS - Steam/hydronic systems.

- A. Obtain the services of a professional water treatment firm for testing the boiler water and prescribing the treatment chemicals.
- B. Provide a one-year supply of treatment chemicals to maintain the boiler water at or below the following conditions:
  - 1. Neutralized specific conductance
  - 2. Total alkalinity 600 ppm
  - 3. Suspended solids 250 ppm
  - 4. Silica 90 ppm

The treatment will include a filming amine additive for protection of the condensate piping.

- C. Supply materials are to be based on boiler operation of 10 hours per week at 50% - 100% of capacity with 50% of condensate being returned to the system.

### PART 3 EXECUTION

#### 3.01 SYSTEM COMMISSIONING

- A. The following procedures will be verified during the commissioning process. **All procedures are to be checked and carried out by the contractor prior to commissioning with the Owner.**

#### 3.02 PRELIMINARY WALKTHROUGH

- A. A preliminary walkthrough to provide a visual check of the various systems to verify that all components are properly installed. The following items will be observed.
- B. Air Distribution
  - 1. Mounting and support of equipment
  - 2. Noise, vibration, air and water leaks
  - 3. Air filtration, presence of dampers, diffusers, grilles, fire dampers and access doors
  - 4. Presence of thermostats and other adjustable temperature control devices
  - 5. Presence of smoke sensors and other safety devices
  - 6. Instrumentation, gauges, thermometers, flow measuring devices
  - 7. Hoods and exhaust systems
- C. Plumbing and Piping Systems

1. Mounting support of equipment
2. Noise, vibration and leaks
3. Strainers, valves fixtures and instrumentation and flow measuring or control

D. Heating and Cooling Equipment

1. General installation and service address
2. Proper cycling
3. Excessive noise, vibration or leaks
4. Fuel storage, distribution instrumentation and filtration
5. Presence of safety devices and controls

E. Refrigeration Systems

1. Compressor operation and lubrication
2. Unit cooler operation
3. Cooling fluid flow and control
4. Temperature maintenance and instrumentation
5. Vibration, excessive noise and leaks

F. Fire Protection System

1. General installation and compliance with approved shop drawings and design drawings
2. Head locations
3. Proper functioning of alarms
4. NFPA certification - Chapter 13
5. Locate spare heads, wrench and NFPA 13A manual

G. Fire Alarm System

H. Public Address / Clock System

I. Any discrepancies or deficiencies are to be noted for further investigation during the detailed evaluation.

J. Verify that all cleaning has been completed

K. Verify that all touch-up painting has been completed.

### 3.03 DETAILED EVALUATION

A. Air distribution systems

1. Spot checks of approximately 10% of air outlets will be made. Engineer will select outlets and air balancer will demonstrate a reading of that outlet. Where appropriate, the thermostat will be adjusted to simulate full cooling, full heating, hood operation, etc.

2. Air balancer will demonstrate total airflow at each air handler at simulated full cooling and/or maximum fresh air.
3. Air balancer will demonstrate proper air flow at each fume hood, based on previously marked sash positions.
4. Air balancer will demonstrate proper airflow at each process hood.
5. Demonstrate proper room static pressure with respect to adjacent space(s).
6. Motor HP draw will be demonstrated at selected fan motors.
7. Discrepancies between balancing report and spot check results will be dealt with to correct any deficiencies. In the event that significant deficiencies are detected, the entire balancing procedure may be required to be repeated.
8. Any noted drafts or noisy air distribution devices will be evaluated and corrective action taken.
9. Any balancing related problems identified during the Preliminary Walkthrough will be addressed and corrected.

B. Heat Transfer and Hydronic Systems

1. Contractor will demonstrate that strainers have been cleaned by team observation of approximately five (5) strainers selected by the Engineer. If significant debris is found in selected strainers, all strainers will be cleaned.
2. Balancer will demonstrate fluid flows at approximately 10% of flow control devices.
3. Selected pumps will have amp draws demonstrated.
4. Fluid temperatures and pressures will be observed at each system, and compared with design values.
5. Glycol concentration will be measured for compliance with design specifications.
6. Any noted deficiencies between the sample evaluations and the balancing report will be dealt with to correct any deficiencies. In the event that significant deficiencies are detected, the entire balancing procedure may be required to be repeated.
7. Any balancing related problems identified during the Preliminary Walkthrough will be addressed and corrected.

C. HVAC Control Systems

1. The Control Subcontractor will demonstrate the proper function of each control system, and instruct Owner's operating personnel in the proper operation of the systems. The balancing contractor will be present to correct flows and assist in fine tuning system.
2. Control Subcontractor will demonstrate the proper functioning of the following devices:
  - a. Each thermostat to adequately control heating and cooling
  - b. Each automatic damper and valve
  - c. Fresh air and return air dampers
  - d. Economizer operation
  - e. Boiler, chiller and pump starting and stopping from program control
  - f. Exhaust fan and air handler start and stop

- g. Variable air volume control of VAV air handlers, and tracking of associated return fan
        - h. Variable air volume control of VAV exhaust fans
        - i. Freeze prevention control
  3. Control Subcontractor will point out proper labeling of each control device.
  4. Control Subcontractor and Balancing Subcontractor will coordinate efforts as required until all functions of air distribution and hydronic systems have been fully demonstrated and have been accepted by the Owner and the Engineer.
- D. Sheet Metal Subcontractor will demonstrate the following:
  1. Proper voltage, overload heater size and rotation of each motor driven fan or air handling device.
  2. Proper belt tension and drive alignment
  3. Proper clearance and deflection of spring isolation of fans and drives
  4. Proper installation of flexible connections
  5. Sealing of all ductwork per specification
  6. Complete insulation of ductwork and plenums and sound attenuation where required
  7. Completion of any deficiencies pointed out during balancing and control system commissioning
  8. Marking and labeling of each air handling device
  9. Proper shutdown of air handling systems in the event of presence of smoke or products of combustion
  10. Monitor bearings for heat buildup or noise
  11. Demonstrate that heating and cooling coil fins are straight
  12. Demonstrate operation and maintenance of humidification equipment
  13. Sheet Metal Subcontractor will correct any deficiencies noted during Preliminary Walkthrough and Detailed Evaluation
  14. Correct any deficiencies discovered during Preliminary Walkthrough and Detailed Investigation
- E. Each Subcontractor will explain any special features or intricacies of system operation to the building operating personnel. Items covered should include safety features, hazards to be aware of, precautions to be observed to avoid damage to equipment and any necessary seasonal adjustments, which are required. Generally, discuss service frequency of devices such as bearings, belt drives, filters, strainers, etc. Show maintenance and operating personnel where additional information can be found in the Operating and Maintenance Manuals.
- F. Plumbing and Piping Subcontractor will demonstrate and explain the following:
  1. The cleaning, degreasing and flushing of piping systems
  2. The proper filling of hydronic and chilled water systems
  3. Proper glycol concentration and Ph of hydronic and chilled water systems
  4. Piping and valve marking
  5. Equipment labeling
  6. Demonstrate proper operation of fuel supply system



7. Demonstrate proper operation of sewage lift pumps
  8. Demonstrate proper operation of sump pumps
  9. Tour facility and demonstrate proper installation and operation of plumbing fixtures and piping systems
  10. Demonstrate and explain chemical feed equipment
  11. Demonstrate operation of air compressor, deionized water equipment and other process equipment
  12. Correct any deficiencies discovered during Preliminary Walkthrough and Detailed Investigation
- G. Refrigeration Subcontractor will instruct equipment operators and demonstrate and explain the following:
1. Proper charging and lubrication of each refrigeration system
  2. Vibration isolation of equipment
  3. Proper piping insulation
  4. Adequate air flow at cold diffusers
  5. Proper connection of piping
  6. Proper coolant flow and temperature
  7. Defrost of cold diffusers
  8. Maintenance of required temperature in cold boxes
  9. Proper maintenance and cleaning
  10. Labeling of equipment and control devices
  11. Verify proper voltage, rotation and overload heater sizing
  12. Correct any deficiencies noted during Preliminary Walkthrough and Detailed Investigation
- H. Fire Alarm System
1. ....
- I. Public Address / Clock system
1. ...

### 3.04 CERTIFICATION

- A. The following certificate will be signed by each trade listed, indicating that all commissioning work has been completed and that all systems are installed according to the contract documents and manufacturer's installation instructions. The Contractor's Subcontractors further certify that all adjustments, lubrication, alignment and startup procedures have been carried out.
- B. Individual Contractor Certifications:

**CERTIFICATE OF COMPLETION**

(Building) \_\_\_\_\_

(Address) \_\_\_\_\_

1. Mechanical Contractor \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

2. Sheet Metal \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

3. Plumbing \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

4. Fitting \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

5. Balancing \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

6. Controls \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

7. Refrigeration \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

8. Insulation \_\_\_\_\_  
(firm)

\_\_\_\_\_  
(signature) (title) (date)

9. Fire Protection (sprinkler) \_\_\_\_\_  
(firm)  
\_\_\_\_\_  
(signature) (title) (date)

END OF SECTION

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PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - 1. Demonstrations of operation of systems, subsystems and equipment.
  - 2. Training in operation and maintenance of systems, subsystems and equipment.
  - 3. Demonstration and training videotapes.
- B. Related Sections include the following:
  - 1. All other Specification Sections for specific requirements for demonstration and training for products in those Sections.

1.03 SUBMITTALS

- A. Instruction Program:
- B. Demonstration and Training Videotapes: None

1.04 QUALITY ASSURANCE

- A. Instructor Qualifications:

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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TECHNICAL SPECIFICATIONS

UAA PSB ROOF REPLACEMENT

PROJECT NO. 14-0040

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## PART 1 - GENERAL

### 1.01 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.

### 1.02 DEFINITIONS

- A. "Approved": When used to convey ARCHITECT action on Contractor's submittals, applications, and requests, "approved" is limited to ARCHITECT duties and responsibilities as stated in the Conditions of the Contract.
- B. "Directed": A command or instruction by ARCHITECT. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- C. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- D. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- E. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- F. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- G. "Provide": Furnish and install, complete and ready for the intended use.
- H. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

### 1.03 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
- D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.
- E.
- |         |  |                |
|---------|--|----------------|
| FS      | Federal Specification<br>Available from Department of Defense Single<br>Stock Point<br><a href="http://www.dodssp.daps.mil">www.dodssp.daps.mil</a>                | (215) 697-6257 |
|         | Available from General Services Administration<br><a href="http://www.apps.fss.gsa.gov/pub/fedspecs/index.cfm">www.apps.fss.gsa.gov/pub/fedspecs/index.cfm</a>     | (202) 619-8925 |
|         | Available from National Institute of Building<br>Sciences  | (202) 289-7800 |
| MILSPEC | Military Specification and Standards<br>Available from Department of Defense Single<br>Stock Point<br><a href="http://www.dodssp.daps.mil">www.dodssp.daps.mil</a> | (215) 697-6257 |

#### 1.04 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

1.05	AGC	Associated General Contractors of America (The)	(703) 548-3118
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	www.agc.org	
AHA	American Hardboard Association www.hardboard.org	(847) 934-8800
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723  (404) 636-8400
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWPA	American Wood-Preservers' Association www.awpa.com	(817) 326-6300
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
EIMA	EIFS Industry Members Association www.eima.com	(800) 294-3462 (770) 968-7945
FM	Factory Mutual System (See FMG)	
FMG	FM Global (Formerly: FM - Factory Mutual System) www.fmglobal.com	(401) 275-3000
GA	Gypsum Association www.gypsum.org	(202) 289-5440
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405

NAIMA	North American Insulation Manufacturers Association (The) www.naima.org	(703) 684-0084
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NFPA	NFPA International (National Fire Protection Association International) www.nfpa.org	(800) 344-3555 (617) 770-3000
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
SDI	Steel Deck Institute www.sdi.org	(847) 462-1930
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980
SPRI	SPRI (Single Ply Roofing Institute) www.spri.org	(781) 647-7026
SWRI	Sealant, Waterproofing, & Restoration Institute www.swrionline.org	(816) 472-7974
UL	Underwriters Laboratories Inc. www.ul.com	(800) 704-4050 (847) 272-8800
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WSRCA	Western States Roofing Contractors Association www.wsrca.com	(800) 725-0333 (650) 548-0112
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. Remove all designated and undesignated building components, equipment and fixtures as necessary to complete the Work.
- B. Cap and identify utilities.
- C. Removal and storage of items to be reinstalled upon completion of alteration and renovation work.

### 1.03 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- C. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

### 1.04 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

### 1.05 SUBMITTALS

- A. Submit demolition and removal procedures and schedule.
- B. Submit record drawings at end of project that reflect demolition findings.

### 1.06 EXISTING CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

- B. Conduct demolition to minimize interference with adjacent building areas. Maintain protected egress and access at all times.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Provide, erect, and maintain temporary barriers and security devices.
- E. Except where noted otherwise, Contractor shall dispose of all removed material and equipment.
- F. Hazardous Materials: Hazardous materials are present and to be demolished. A report on the presence of hazardous materials is in Specification 02 26 00. Examine report to become aware of locations where hazardous materials are present. Remove hazardous materials according to all current and applicable codes, regulations, rules, laws and ordinances, etc., by all OSHA, Federal, State, Municipal and Local entities and other Authorities having Jurisdiction.
  - 1. If suspected hazardous materials other than in the roof are encountered, do not disturb; immediately notify Owner's Representative. Hazardous materials will be removed by Owner under a separate contract.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Protect existing items that are not required to be altered.
- C. Disconnect, remove, and cap designated and non-required utility services within demolition areas. Notify Owner minimum 24 hours prior to disconnection and removal of services.
- D. Mark location of disconnected utilities. Identify and indicate capping locations on Project Record Documents. See Drawings for antenna work and information.
- E. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- F. Coordinate roofing and project demolition with work of other Sections.

### 3.02 EXECUTION

- A. Demolish in an orderly and careful manner. Protect existing supporting structural members and building components to remain. Provide shoring, bracing and supports as required.
- B. Except where noted otherwise, immediately remove demolished materials from site.
- C. Remove materials to be re-installed or retained in manner to prevent damage. Store and protect.
- D. Remove and promptly dispose of contaminated, vermin infested, or dangerous materials encountered.
- E. Do not burn or bury materials on site.
- F. Remove demolished materials from site as work progresses. Upon completion of work, leave areas of work in clean condition.
- G. Every effort has been made to verify that the information presented in the Contract Documents is complete and accurate; however, it shall be the Contractor's responsibility to verify all existing site conditions, information and dimensions.

### 3.03 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

### 3.04 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION



**Bulk Sample Analysis for Asbestos**

**WL Project #:** LA-012458

**Report #:** 607807

**Client Project #:** 613002.013

**Report By:** R. Briggs

**Report Date:** 04/29/2015

**Client:** BDS Architects  
3330 C St, Ste 200  
Anchorage, AK, 99503

**Collected By:** Client  
**Collection Date:** 04/10/2015  
**Analysis By:** D. Milton  
**Analysis Date:** 04/28/2015  
**Received By:** R. Briggs  
**Received Date:** 04/24/2015

**TAT:** 5 Day

**Sample Count:** 3  
**Layer Count:** 15

**Project Name/Location:** UAA PSB Roofs

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
1	AB15-03191A	High Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Tar Mastic	1 of 5

<b>Asbestos: None Detected</b>
<b>Other Fiberous: None Detected</b>

**Non-Fiberous Materials:** 100%

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
1	AB15-03191B	High Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	2 of 5

<b>Asbestos: None Detected</b>	
<b>Other Fiberous Material</b>	<b>Fiberous %</b>
Cellulose	60%

**Other Fiberous Materials:** 60%

**Non-Fiberous Materials:** 40%

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
1	AB15-03191C	High Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	3 of 5

<b>Asbestos: None Detected</b>	
<b>Other Fiberous Material</b>	<b>Fiberous %</b>
Cellulose	60%

**Other Fiberous Materials:** 60%

**Non-Fiberous Materials:** 40%

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
1	AB15-03191D	High Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	4 of 5

<b>Asbestos: None Detected</b>	
<b>Other Fiberous Material</b>	<b>Fiberous %</b>
Cellulose	60%

**Other Fiberous Materials:** 60%

**Non-Fiberous Materials:** 40%

**Bulk Sample Analysis for Asbestos**

WL Project #: LA-012458

Report #: 607807

Client Project #: 613002.013

Report By: R. Briggs

Report Date: 04/29/2015

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
1	AB15-03191E	High Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Tar Mastic	5 of 5

<b>Asbestos: None Detected</b>
<b>Other Fibrous: None Detected</b>

**Non-Fibrous Materials: 100%**

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
2	AB15-03192A	Low Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Vapor Barrier	1 of 4

<b>Asbestos Type</b>	<b>Asbestos %</b>
Chrysotile	30%
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	30%

**% Asbestos: 30%**

**Other Fibrous Materials: 30%**

**Non-Fibrous Materials: 40%**

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
2	AB15-03192B	Low Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	2 of 4

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	60%

**Other Fibrous Materials: 60%**

**Non-Fibrous Materials: 40%**

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
2	AB15-03192C	Low Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	3 of 4

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	60%

**Other Fibrous Materials: 60%**

**Non-Fibrous Materials: 40%**

**Bulk Sample Analysis for Asbestos**

WL Project #: LA-012458

Report #: 607807

Client Project #: 613002.013

Report By: R. Briggs

Report Date: 04/29/2015

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
2	AB15-03192D	Low Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Tar Mastic	4 of 4

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	Trace

Other Fibrous Materials: 0%

Non-Fibrous Materials: 100%

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
3	AB15-03193A	Lower Room Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Vapor Barrier	1 of 6

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	20%

Other Fibrous Materials: 20%

Non-Fibrous Materials: 80%

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
3	AB15-03193B	Lower Room Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Brown		No	Fesco	2 of 6

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	70%

Other Fibrous Materials: 70%

Non-Fibrous Materials: 30%

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
3	AB15-03193C	Lower Room Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	3 of 6

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	60%

Other Fibrous Materials: 60%

Non-Fibrous Materials: 40%

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
3	AB15-03193D	Lower Room Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	4 of 6

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	60%

Other Fibrous Materials: 60%

Non-Fibrous Materials: 40%

**Bulk Sample Analysis for Asbestos**

WL Project #: LA-012458

Report #: 607807

Client Project #: 613002.013

Report By: R. Briggs

Report Date: 04/29/2015

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
3	AB15-03193E	Lower Room Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Felt	5 of 6

<b>Asbestos: None Detected</b>	
<b>Other Fibrous Material</b>	<b>Fibrous %</b>
Cellulose	60%

**Other Fibrous Materials: 60%**

**Non-Fibrous Materials: 40%**

<b>Client ID #</b>	<b>WL ID#</b>	<b>Location:</b>		
3	AB15-03193F	Lower Room Roof		
<b>Color</b>		<b>Homogenous</b>	<b>Material</b>	<b>Layer</b>
Black		No	Tar Mastic	6 of 6

<b>Asbestos Type</b>	<b>Asbestos %</b>
Chrysotile	10%
<b>Other Fibrous: None Detected</b>	

**% Asbestos: 10%**

**Non-Fibrous Materials: 90%**

  
Dave Milton, Lab Analyst

04/29/2015

Date

04/29/2015

Date

Analysis performed by EPA Method 600/R-93/116. All quantities reported are based on visual estimation by PLM, unless point-counting method is requested and noted for the sample. Test report relates only to items tested and must not be used by client to claim product endorsement by NVLAP or any agency of the U.S. Government. Test reports must not be reproduced without the approval of WL, LLC, and are subject to WL, LLC. General Terms and Conditions (available upon request).

END OF SECTION





1. North entrance, Roof 3 center,  
Roof 1 on right.



2. North & west sides of PSB at  
Roof 1.



3. Southeast end of PSB on left.



4. Facing south, Roof 1 on right.



5. Facing north Roof 1.



6. Antennas, support tower & base support beam at northeast corner of Roof 1, to be removed. See 1/A6.





7. Antenna and support structure near south end of Roof 1, to be removed.



8. Facing east, penthouse with louvered walls.



9. Penthouse interior under Roof 2, facing south. Note door (arrow) with bottom to be modified.



10. Penthouse interior louver wall framing, and underside of Roof 2 metal deck.



11. "Transfer duct" enclosure on Roof 1.



12. Low Roof 3, facing northwest. New metal siding system to be added to part of this wall (Additive Alternate #1).





13. Low Roof 3, facing southwest. Remove existing conduit (Base Bid). New siding work on this wall (Additive Alternate #1). Install new wall conduit and j-box (Base Bid).



14. Roof 3, facing south. Note building joint at base of windows. (older photo).



15. At south end of Roof 3 facing east. Capped curb & capped pipes to be removed.



16. Roof 3 facing south. This wall is thought to be a source of wind driven leaks. Large curved roof conduits to be removed. See drawings for wall conduit treatment.

Additive Alternate #1 is to cover this wall with a new metal panel wall system. See drawings.



17. Roof 3, see photo 16.



18. East edge of Roof 3 with sloped windows and building seismic joint at base. See details.





19. Northeast corner of Roof 3 with building joint.



20. Roof 3, south end of building joint, facing north.



21. South end of corridor below Roof 3. Existing roof drains are above suspended ceiling next to CMU wall on right.



22. Roof drain access from below roof at Roof 1. Looking up through suspended ceiling grid at large ceiling space. GWB lid below roof deck.



## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Metal ladders.
  - 2. Miscellaneous metal fabrications.
- B. Products furnished, but not installed, under this Section include the following: None.
- C. Related Sections include the following:
  - 1. Division 7 Section "Built-up Roofing".
  - 2. Division 7 Section "Rough Carpentry".
  - 3. Division 9 Section "Painting".

### 1.03 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of metal fabrications that are anchored to or that receive other work. 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.

### 1.04 PERFORMANCE REQUIREMENTS

- A. Structural Performance of Ladders: Provide ladders capable of withstanding the effects of loads and stresses within limits and under conditions specified in ANSI A14.3.
- B. Thermal Movements: Provide exterior metal fabrications that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.05 ACTION SUBMITTALS

- A. Shop Drawings: Show fabrication and installation details for metal fabrications.
  - 1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

1.06 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1, "Structural Welding Code-Steel."

1.07 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on Shop Drawings.
  - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
  - 2. Provide allowance for trimming and fitting at site.

PART 2 - PRODUCTS

2.01 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.02 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.03 FASTENERS

- A. General: Unless otherwise indicated, provide Type 316 stainless-steel fasteners for exterior use. Select fasteners for type, grade, and class required.
- B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.

- C. Stainless-Steel Bolts and Nuts: Regular hexagon-head annealed stainless-steel bolts, ASTM F 593; with hex nuts, ASTM F 594; and, where indicated, flat washers; Alloy Group 2.
- D. Anchor Bolts: ASTM F 1554, Grade 36.
- E. Plain Washers: Round, ASME B18.22.1.
- F. Lock Washers: Helical, spring type, ASME B18.21.1.

#### 2.04 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Zinc-Rich Shop Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

#### 2.05 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32-inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Form exposed work true to line and level with accurate angles and surfaces and straight edges.
- E. Weld corners and seams continuously to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Locate joints where least conspicuous.

- G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
- J. Galvanize products where indicated. Ladders are to be primed and painted, not galvanized.
- K. Prime metal and supports with Zinc rich primer where indicated to be painted.

## 2.06 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.
- C. Protect welds and cut ends of galvanized steel with spray galvanizing touch up paint.
- D. Protect miscellaneous framing and supports with zinc-rich primer where painting is indicated.

## 2.07 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly per Section 09 90 00. Prime coat only is required when metal is not exposed to weather elements and is beneath the exposed plane of the roof membrane.

## 2.08 STEEL AND IRON FINISHES

- A. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed metal fabrications:
- B. Shop Priming: Apply shop primer to uncoated surfaces of metal fabrications. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

## PART 3 - EXECUTION

### 3.01 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations.
- C. Field Welding: Comply with the following requirements:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- D. Fastening to In-Place Construction: Coordinate installation of support blocking with installation of siding to ensure adequate securement and minimize distortion to sheet metal. Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide through bolts, lag bolts, wood screws, and other connectors.

### 3.02 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

### 3.03 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
  - 1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

### 3.04 TOUCHUP PAINTING

- A. Touch up surfaces and finishes after erection. Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Division 9 painting Sections.

- B. Painted Surfaces: Clean field welds, bolted connections, and abraded areas and touch up paint with the same material as used for shop painting.

3.05 FINISH PAINTING

- A. Refer to section 09 90 00.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. Section Includes:
  - 1. Exterior non-load-bearing wall framing.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of cold-formed steel framing product and accessory.
- B. Shop Drawings:
  - 1. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel framing; fabrication; and fastening and anchorage details, including mechanical fasteners.
  - 2. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.

1.04 QUALITY ASSURANCE

- A. Product Tests: Mill certificates or data from a qualified independent testing agency indicating steel sheet complies with requirements, including base-metal thickness, yield strength, tensile strength, total elongation, chemical requirements, and metallic-coating thickness.
- B. AISI Specifications and Standards: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" and its "Standard for Cold-Formed Steel Framing - General Provisions."
- C. Comply with AISI S230 "Standard for Cold-Formed Steel Framing - Prescriptive Method for One and Two Family Dwellings."

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect cold-formed steel framing from corrosion, moisture staining, deformation, and other damage during delivery, storage, and handling.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. California Expanded Metal Products Company (CEMCO).
  2. Clark Western Building Systems, Inc.
  3. Craco Manufacturing, Inc.
  4. Custom Stud, Inc.
  5. Dietrich Metal Framing; a Worthington Industries Company.
  6. Marino/WARE.
  7. Quail Run Building Materials, Inc.
  8. SCAFCO Corporation.
  9. Steel Construction Systems.
  10. Steeler, Inc.
  11. Super Stud Building Products, Inc.
  12. The Steel Network, Inc.
  13. United Metal Products, Inc.
  14. Approved Equal.

### 2.02 PERFORMANCE REQUIREMENTS

- A. Cold-Formed Steel Framing, General: Design according to AISI's "Standard for Cold-Formed Steel Framing - General Provisions."
1. Design exterior non-load-bearing wall framing to accommodate horizontal deflection without regard for contribution of sheathing materials.

### 2.03 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories from steel sheet, ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of same grade and coating weight used for framing members.
- B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows:
1. Supplementary framing.
  2. Bracing, bridging, and solid blocking.
  3. Web stiffeners.

### 2.04 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123/A 123M.



- B. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with allowable load capacities calculated in accordance with ICC-ES AC70, greater than or equal to the design load, as determined by testing per ASTM E 1190 conducted by a qualified testing agency.
- C. Mechanical Fasteners: ASTM C 1513, corrosion-resistant-coated, self-drilling, self-tapping steel drill screws.
  - 1. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.
- D. Welding Electrodes: Comply with AWS standards.

## 2.05 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: ASTM A 780.
- B. Shims: Cold-formed steel of same grade and coating as framing members supported by shims.

## 2.06 FABRICATION

- A. Fabricate cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.
  - 1. Fabricate framing assemblies using jigs or templates.
  - 2. Cut framing members by sawing or shearing; do not torch cut.
  - 3. Fasten cold-formed steel framing members by welding, screw fastening, pneumatic pin fastening, or riveting as standard with fabricator. Wire tying of framing members is not permitted.
    - a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
    - b. Locate mechanical fasteners and install according to Shop Drawings, with screw penetrating joined members by not less than three exposed screw threads.
  - 4. Fasten other materials to cold-formed steel framing by welding, bolting, pneumatic pin fastening, or screw fastening, according to Shop Drawings.
- B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies to prevent damage or permanent distortion.
- C. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
2. Squareness: Fabricate each cold-formed steel framing assembly to a maximum out-of-square tolerance of 1/8 inch.

### PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance.
  1. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.02 INSTALLATION, GENERAL

- A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.
- B. Install cold-formed steel framing according to AISI S200 and to manufacturer's written instructions unless more stringent requirements are indicated.
- C. Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.
  1. Screw, bolt, or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane and true position between fabricated panels not exceeding 1/16 inch.
- D. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.
  1. Cut framing members by sawing or shearing; do not torch cut.
  2. Fasten cold-formed steel framing members by welding, screw fastening, or riveting. Wire tying of framing members is not permitted.
    - a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
    - b. Locate mechanical fasteners and install according to Shop Drawings, and complying with requirements for spacing, edge distances, and screw penetration.
- E. Install framing members in maximum lengths.
- F. Erection Tolerances: Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

### 3.03 NON-LOAD BEARING WALL INSTALLATION

- A. Install miscellaneous framing and connections, including supplementary framing, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

### 3.04 REPAIRS AND PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, which ensure that cold-formed steel framing is without damage or deterioration at time of Substantial Completion.

END OF SECTION

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## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. Section Includes:

- Rooftop parapets and curbs.

- Framing with dimensional lumber.

- Sheathing.

- Bevel cedar siding.

- Weather barriers.

- B. Related Sections include the following:

- Division 5 Section "Metal Fabrications".

- Division 7 Section "Built-up Roofing".

- Division 7 Section "Building Insulation".

- Division 7 Section "Joint Sealants".

- Division 7 Section "Sheet Metal Flashing and Trim".

- Division 9 Section "Painting".

### 1.03 REFERENCES

- A. AFPA T10 - Wood Frame Construction Manual; American Forest and Paper Association; 2001.
- B. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2005.
- C. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood-Preservers' Association; 2007.
- D. PS 1 - Construction and Industrial Plywood; National Institute of Standards and Technology (Department of Commerce); 2007.

#### 1.04 DEFINITIONS

- A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise indicated.
- B. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- C. Lumber grading agencies, and the abbreviations used to reference them, include the following:

WCLIB - West Coast Lumber Inspection Bureau.

WWPA - Western Wood Products Association.

#### 1.05 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.

Include copies of warranties from chemical treatment manufacturers for each type of treatment.

#### 1.06 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:

Wood-preservative-treated wood.

Power-driven fasteners.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber or panels flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

## 1.08 FIELD CONDITIONS

- A. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.

Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

## PART 2 - PRODUCTS

### 2.01 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and the following grading rules by the WWPA: Western Wood Products Association, "Western Lumber Grading Rules".

Provide dressed lumber, S4S, unless otherwise indicated.

Factory mark each piece of lumber with grade stamp of grading agency.

Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.

All wood materials are to be pressure preservative treated except the cedar bevel siding.

- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness.

- C. Softwood Plywood: DOC PS 1.

- D. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.

Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer, that meet or exceed those indicated.

Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

### 2.02 WOOD-PRESERVATIVE-TREATED LUMBER AND PLYWOOD

- A. Preservative Treatment by Pressure Process: AWPA U1-07; use UC3B for dimensional lumber and plywood.

- B. Preservative Chemicals:

CCA – Chromated Copper Arsenate.

Approved equal.

- C. Application: Preservative treat all exterior rough carpentry except cedar siding.
- D. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- E. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.

### 2.03 DIMENSION LUMBER FRAMING

- A. Interior lumber below roof decking used for framing is not required to be preservative treated unless in contact with concrete.
- B. Rough Lumber is to be No. 2 grade and any of the following species:

Size: Nominal sizes as indicated on drawings, S4S.

Moisture Content: S-dry.

Species:

- a. Hem-fir (north) NLGA
- b. Hem-fir; WCLIB or WWPA.
- c. Douglas fir-larch, (north); NLGA

### 2.04 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

Blocking.

Nailers.

- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber, with 19 percent maximum moisture content of any species.

Hem-fir (north); NLGA.

Spruce-pine-fir; NLGA.

Hem-fir; WCLIB or WWPA.

Western woods; WCLIB or WWPA.



Northern species; NLGA.

- C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

## 2.05 SHEATHING

- A. Plywood Sheathing: DOC PS-1; Exterior, Exposure 1, C-D plugged plywood sheathing.

Thickness: 1/2-inch, 5/8-inch, or 3/4-inch as indicated, nominal.

OSB sheathing is not allowed.

## 2.06 CEDAR BEVEL SIDING

- A. Species and Grade: Utility Grade B western red cedar; NLGA, WCLIB, or WWPA.

Pattern: Bevel siding, S1S2E, dimensions measured on the face and thick edge at 19 percent moisture content.

Width:

- a. 5-1/2 by 3/4 inch
- b. 7-1/4 by 3/4 inch

## 2.07 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

Type 304 stainless steel fasteners are required when in contact with preservative treated lumber and plywood, or existing fire treated lumber and plywood.

- B. Nails, Brads, and Staples: ASTM F 1667.

- C. Power-Driven Fasteners: NES NER-272.

- D. Screw Fasteners for securement to roof deck: Factory-coated steel fasteners complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof products to roof deck.

Diameter: #12, threaded for wood.

Length: Penetrate 3/4" minimum through deck.

E. Wood Screws: ASME B18.6.1.

F. Screws for Fastening Gypsum Sheathing to Wood Framing: Type 304 stainless steel screw fasteners are required due to contact with preservative treated lumber and plywood, in length and thread style recommended by sheathing manufacturer for thickness of sheathing to be attached.

G. Lag Bolts: Type 304 stainless steel, ASME B18.2.1.

H. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

## 2.08 MISCELLANEOUS MATERIALS

A. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

## PART 3 - EXECUTION

### 3.01 EXAMINATION, GENERAL

A. Examine substrates, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION, GENERAL

A. Clean substrates of projections and substances detrimental to application.

### 3.03 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.

- D. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- F. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- G. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- H. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - NES NER-272 for power-driven fasteners.
  - Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- I. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.
- J. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

### 3.04 WOOD FRAMING INSTALLATION

- A. General: Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs. Fasten plates to supporting construction unless otherwise indicated.

For exterior parapets, provide wood studs where indicated spaced 24 inches o.c. unless otherwise noted.

- B. Top and bottom plates at parapets to be staggered minimum two feet.
- C. Do not splice structural members between supports, unless otherwise indicated.
- D. Construct corners and intersections with three or more studs.
- E. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.

### 3.05 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

### 3.06 SHEATHING INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
  - NES NER-272 for power-driven fasteners.
  - Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."
- D. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
- F. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

### 3.07 INSTALLATION OF WOOD PANEL SHEATHING

- A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten sheathing panels as indicated below:
  - Nail to wood framing.
  - Staples are not permitted.
  - Space panels 1/8-inch apart at edges and ends.

3.08 TOLERANCES

A. Framing Members: 1/4 inch from true position, maximum.

B. Variation from Plane: 1/4 inch in 10 feet maximum.

3.09 PROTECTION

A. Protect installed products from damage from weather and other causes during construction.

END OF SECTION

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PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
  - 1. Factory-formed, concealed-fastener, lap-seam metal wall panels.
- B. Related Sections include the following:
  - 1. Division 6 Section "Rough Carpentry".
  - 2. Division 7 Section "Built-Up Roofing".
  - 3. Division 7 Section "Sheet Metal Flashing and Trim".
  - 4. Division 7 Section "Joint Sealers".

1.03 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this Project, by a qualified testing and inspecting agency.
- B. Thermal Movements: Provide metal wall panel assemblies that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 160 deg F, ambient; 180 deg F, material surfaces.

1.04 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal wall panel and accessory.
- B. Shop Drawings: Show fabrication and installation layouts of metal wall panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details. Distinguish between factory- and field-assembled work, if any.
- C. Samples for Selection: For each type of metal wall panel indicated with factory-applied color finishes.
  - 1. Include similar Samples of trim and accessories involving color selection.

2. Include manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each sealant exposed to view.

D. Maintenance Data: For metal wall panels to include in maintenance manuals.

E. Warranties: Special warranties specified in this Section.

#### 1.05 QUALITY ASSURANCE

A. Installer Qualifications: The manufacture shall authorize the installer and actual work shall be supervised by personnel trained by the manufacturer.

1. Installer's responsibilities include fabricating and installing metal wall panel assemblies and providing professional engineering services needed to assume engineering responsibility.
2. Engineering Responsibility: Preparation of data for metal wall panels, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Source Limitations: Obtain each type of metal wall panel through one source from a single manufacturer.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of metal wall panels and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."

1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, metal wall panels, and other manufactured items so as not to be damaged or deformed. Package metal wall panels for protection during transportation and handling.

B. Unload, store, and erect metal wall panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal wall panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal wall panels to ensure dryness, with positive slope for drainage of water. Do not store metal wall panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Protect strippable protective covering on metal wall panels from exposure to sunlight and high humidity, except to extent necessary for period of metal wall panel installation.

#### 1.07 PROJECT CONDITIONS



- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal wall panels to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Verify locations of structural members and wall opening dimensions by field measurements before metal wall panel fabrication and indicate measurements on Shop Drawings.
  - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal wall panels without field measurements, or allow for field trimming of panels. Coordinate wall construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

#### 1.08 COORDINATION

- A. Coordinate metal wall panel assemblies with rain drainage work, flashing, trim, and construction of studs, soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

#### 1.09 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal wall panel assemblies that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures, including rupturing, cracking, or puncturing.
    - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  - 2. Warranty Period: Two years from date of Substantial Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal wall panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

## PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
1. Basis-of-Design Products: The design for each metal wall panel specified is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.02 PANEL MATERIALS

- A. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
1. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792.
  2. Surface: Smooth, flat finish.
  3. Exposed Coil-Coated Finish:
    - a. 2-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  4. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

2.03 MISCELLANEOUS MATERIALS

- A. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal wall panels by means of factory-applied coating.
1. Fasteners for Wall Panels: Self-drilling or self-tapping 410 stainless steel hex washer head, with EPDM washer under heads of fasteners bearing on weather side of metal wall panels.
  2. Fasteners for Flashing and Trim: Stainless steel blind fasteners or self-drilling screws with hex washer head.
  3. Blind Fasteners: High-strength stainless-steel rivets.

2.04 CONCEALED-FASTENER, LAP-SEAM METAL WALL PANELS

- A. General: Provide factory-formed metal wall panels designed to be field assembled by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.

- B. Flush-Profile, Concealed-Fastener Metal Wall Panels: Formed with vertical panel edges and flat pan between panel edges; no stiffening ribs, with flush joint between panels.
1. Manufacturers: Subject to compliance with requirements:
    - a. Basis-of-Design Product: Subject to compliance with requirements, provide "Prestige Series" by AEP-Span or comparable product by one of the following:
  2. Manufacturers:
    - a. CENTRIA Architectural Systems.
    - b. Firestone.
    - c. Kingspan.
    - d. Metal Sales.
    - e. Approved equal.
  3. Material: Aluminum-zinc alloy-coated steel sheet, 24 gauge nominal thickness.
    - a. Exterior Finish: 2-coat fluoropolymer.
    - b. Color: As selected by Architect from manufacturer's full range.
  4. Full 12-inch Panel.
  5. Stiffening ribs: one.
  6. Wave Pattern: no
  7. Panel Height: 1.5 inches.
  8. Wind Clip: 16 ga galvanized steel to reinforce panel for high wind resistance.

## 2.05 ACCESSORIES

- A. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly as indicated and including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels, unless otherwise indicated.
1. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch-thick, flexible closure strips; cut or premolded to match metal wall panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
  2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
- B. Flashing and Trim: See Section 07 62 00.
- C. Screws holding wall panels to the structure shall be stainless steel self-tapping sheet metal screws into pre-drilled holes.

- D. For weather tightness, screws shall have EPDM washers and pop-rivets shall be set in wet sealant. Exposed fasteners shall be a minimum of #14 size screw or 3/16" diameter pop-rivet. These fasteners shall be color matched to the wall panels.
- E. Precut profile closures shall be closed cell rubber RE-42 meeting ASTM D-1056 EPT. Metal profile closures, of the same material and color as the wall panel, shall be placed in front of all rubber closures that have UV exposure.
- F. Sealant: See Section 07 92 00.

## 2.06 FABRICATION

- A. General: Fabricate and finish metal wall panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.
- B. Tolerances: Install Metal Wall Panels and sheet metal flashing and trim to a tolerance of 1/4 inch in 20 feet in plane and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- D. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.
  - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
  - 2. Seams: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
  - 3. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
  - 4. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended by metal wall panel manufacturer.
    - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

## 2.07 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal wall panel supports, and other conditions affecting performance of work.
  - 1. Examine primary and secondary wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
  - 2. Examine solid wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
  - 3. Verify that weather-resistant sheathing paper or waterproof underlayment is installed over sheathing or backing substrate as indicated to prevent air infiltration or water penetration.
  - 4. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
- B. Examine roughing-in for components and systems penetrating metal wall panels to verify actual locations of penetrations relative to seam locations of metal wall panels before metal wall panel installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 METAL WALL PANEL INSTALLATION, GENERAL

- A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.
  - 1. Field cutting of metal wall panels by torch is not permitted.
  - 2. Shim or otherwise plumb substrates receiving metal wall panels.
  - 3. Rigidly fasten base end of metal wall panels and allow eave end free movement due to thermal expansion and contraction. Predrill panels.
  - 4. Flash and seal metal wall panels with weather closures at eaves, rakes, and at perimeter of all openings. Do not begin installation until weather barrier and flashings that will be concealed by metal wall panels are installed.
  - 5. Install screw fasteners in predrilled holes.
  - 6. Locate and space fastenings in uniform vertical and horizontal alignment.
  - 7. Install flashing and trim as metal wall panel work proceeds.

8. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
  9. Align bottom of metal wall panels and fasten with self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
  10. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by applying rubberized-asphalt underlayment to each contact surface.
- C. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal wall panel assemblies. Provide types of gaskets, fillers, and sealants indicated or, if not indicated, types recommended by metal wall panel manufacturer.
1. Seal metal wall panel end laps with double beads of sealant, full width of panel. Seal side joints where recommended by metal wall panel manufacturer.
  2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."

### 3.03 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal wall panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal wall panel installation, clean finished surfaces as recommended by metal wall panel manufacturer. Maintain in a clean condition during construction.
- B. After metal wall panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.
- C. Replace metal wall panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Built-up asphalt roofing system, Five-ply.
  - 2. Roof insulation.
  - 3. Vapor retarder; two-ply built-up asphalt roofing
  - 4. Concrete deck (primarily)
  - 5. Fume control kettle
- B. Related Sections include the following:
  - 1. Division 2 Section "Minor Demolition for Remodeling".
  - 2. Division 6 Section "Rough Carpentry".
  - 3. Division 7 Section "Membrane Reroofing Preparation".
  - 4. Division 7 Section "Sheet Metal Flashing and Trim".
  - 5. Division 23 Section "Basic Mechanical Materials and Methods".

### 1.03 SYSTEM DESCRIPTION

- A. Built-up Asphalt Roofing System (BUR), from the bottom up: Structural concrete deck, 2-ply hot-mop vapor retarder, multiple layers of non-tapered rigid insulation, tapered rigid insulation, wood fiberboard, and a BUR membrane consisting of a base sheet, 3-ply sheets, and granular-surfaced cap sheet. Roof system products to be adhered in Type 3 asphalt unless otherwise noted.
  - 1. Approved Membrane Systems:
    - a. Malarkey Specification Number: M5-CI-BHC-H.
    - b. Substitutions: Siplast (Meets or exceeds Malarkey specification.)

### 1.04 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

#### 1.05 PERFORMANCE REQUIREMENTS

- A. General: It is the intent of this project to provide a new insulated roof system with positive slope towards drain locations on all roofs at project completion. The finished slopes at the cap sheet level are to be equal to or greater than 1/4" per foot to eliminate rooftop ponding water conditions. Ponding water is defined as standing or ponding water on the roof in excess of 3/4" deep at 48 hrs following precipitation or rainfall.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.

#### 1.06 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
  - 1. Tapered insulation, including slopes.
  - 2. Manufacturer approved base sheet fastening patterns.
  - 3. Manufacturer approved insulation adhesive patterns.
- C. Samples for Verification: For the following products:
  - 1. 8-by-8-inch square of base sheet, and ply sheet.
  - 2. 8-by-8-inch square of mineral-granule-surfaced cap sheet and flashing sheet, of color specified.
  - 3. 8-by-8-inch square of vapor retarder ply sheet.
  - 4. 8-by-8-inch square of roof insulations.
  - 5. 1 lb of aggregate surfacing material, submit specified color.
- D. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.

#### 1.07 INFORMATIONAL SUBMITTALS

- A. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of meeting performance requirements.
- B. Sample warranties.

#### 1.08 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Warranties: Submit the final executed warranties specified in this Section.



#### 1.09 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by the roofing system manufacturer to install the manufacturer's product; and that is eligible to receive the manufacturer's warranty. Installer is to have a minimum of five years of documentable experience installing similar roof systems on buildings of similar size or greater. Installer shall provide a list of references of same upon request by the Owner.
- B. Source Limitations: Obtain components for built-up roofing from same manufacturer as built-up roofing or approved by built-up roofing manufacturer.
- C. Exterior Fire-Test Exposure: ASTM E 108, Class A; for application and roof slopes indicated, as determined by testing identical built-up roofing materials by a qualified testing agency.
- D. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Meet with Owner, Architect, roofing Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review structural loading limitations of roof deck during and after roofing.
  - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
  - 7. Review governing regulations and requirements for insurance and certificates if applicable.
  - 8. Review temporary protection requirements for roofing system during and after installation.
  - 9. Review roof observation and repair procedures after roofing installation.
  - 10. See Section 07 59 01, 1.05, A.

#### 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roofing materials and insulation from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with

insulation manufacturer's written instructions for handling, storing, and protecting during installation.

- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

#### 1.11 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements. Owner shall be notified and applicator shall use manufacturer's written cold-weather installation procedures if installation temperatures drop below 40 degrees F.
- B. Do not allow non-waterproof roofing products or uncoated felts to become exposed to moisture, rain, ice or snow. Roofing products are to be waterproofed on a daily basis.

#### 1.12 WARRANTY

- A. Special Warranty: Manufacturer's standard or customized form, a without monetary limitation, in which manufacturer agrees to repair or replace components of built-up roofing that fail in materials or workmanship within specified warranty period.
  - 1. Special warranty includes roofing membrane, base flashings, roofing membrane accessories, vapor retarder, and other components of roofing system.
  - 2. Warranty Period: 20 years from date of Substantial Completion.
  - 3. Wind Warranty: ASCE 7-10, Vult = 145 mph, Exposure B, Risk Category II. Pressures above have been reduced for the ASD load cases (0.6\*W).  
(Note to Contractor and roof membrane manufacturer: Wind speed nomenclature and procedure changed in the last code cycle, pressures remain the same for 145 and 110 mph.)
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, and vapor retarders, for the following warranty period:
  - 1. Warranty Period: Two years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.01 BUILT-UP ROOFING MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Malarkey Roofing Company.

2. Or by Siplast, to meet or exceed Malarkey Specifications.

B. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.

## 2.02 BASE-SHEET MATERIALS

A. Base Sheet: ASTM D 4601-98, Type II, SBS-modified, asphalt-impregnated and -coated sheet, with glass-fiber-reinforcing mat, dusted with fine mineral surfacing on both sides.

1. Malarkey "501" fiberglass SBS base sheet.
2. Or by Siplast, to meet or exceed Malarkey Specifications.

## 2.03 ROOFING MEMBRANE PLIES

A. Ply Sheet: ASTM D 2178, Type IV, asphalt-impregnated, glass-fiber felt.

1. Malarkey "500 Ply 4" fiberglass ply sheet.
2. Or by Siplast, to meet or exceed Malarkey Specifications.

B. Cap Sheet: Test results per ASTM D D5147-97, meeting or exceeding ASTM D3909-97B; D6163-97 Type I; Fire rated SBS modified cap sheet with a polyester / glass fabric reinforcement and a mineral-granular surface. Product is to include a bare selvage edge with no granules on lap.

1. Malarkey 625 Paragon SBS Mineral Surfaced Cap Sheet.
2. Or by Siplast, to meet or exceed Malarkey Specifications.

a. Granule Color: White.

## 2.04 BASE FLASHING SHEET MATERIALS

A. Backer Sheet: ASTM D 4601-98, Type II, SBS-modified, asphalt-impregnated and -coated sheet, with glass-fiber-reinforcing mat, dusted with fine mineral surfacing on both sides.

1. Malarkey 501 fiberglass SBS base sheet.
2. Or by Siplast, to meet or exceed Malarkey Specifications.

B. Granule-Surfaced Flashing Sheet: Test results per ASTM D D5147-97, meeting or exceeding ASTM D3909-97B; D6163-97 Type I; Fire rated SBS modified cap sheet with a polyester / glass fabric reinforcement and a mineral-granular surface. Product is to include a bare selvage edge with no granules on lap.

1. Malarkey 625 Paragon SBS Mineral Surfaced Cap Sheet.
2. Or by Siplast, to meet or exceed Malarkey Specifications.

- a. Granule Color: White.
  - C. Glass-Fiber Fabric: Woven glass cloth, treated with asphalt, complying with ASTM D 1668, Type I.
- 2.05 ASPHALT MATERIALS
- A. Asphalt Primer: ASTM D 41.
  - B. Roofing Asphalt: ASTM D 312, Type III, low-odor type.
  - C. Asphalt Roofing Cement:
    - 1. Asphalt Roofing Cement or Mastic: ASTM D 4586-86, Type I; Rubber modified, fibrated, asbestos-free, of consistency required by roofing system manufacturer for application.
- 2.06 AUXILIARY BUILT-UP ROOFING MATERIALS
- A. General: Auxiliary materials recommended by roofing manufacturer for intended use and compatible with built-up roofing.
  - B. Liquid Applied Membrane Flashing (PMMA):
    - 1. “EZ-Seal” by Malarkey Roofing Products or “Kemperol” PMMA Reinforced Resin System (LAM) as approved by the Membrane manufacturer. Install per manufacturer’s instructions. Provide a manufacturer’s 20-year warranty.
  - C. Cold-Applied Adhesive: Roofing manufacturer's standard asphalt-based, one- or two-part, asbestos-free, cold-applied adhesive specially formulated for compatibility and use with built-up base flashings.
  - D. Asphalt Roofing Cement: Rubber modified, ASTM D 4586-86, Type I, asbestos-free, of consistency required by roofing system manufacturer for application.
  - E. Base sheet fasteners, steel or wood substrates: Factory-coated steel fasteners and metal plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening built-up roofing components to substrate, tested by manufacturer for required pullout strength, and acceptable to roofing manufacturer.
  - F. Fasteners:
    - 1. Wood substrates: Hot dipped galvanized nails with 1” inch diameter galvanized steel caps on the head and acceptable to roofing system manufacturer.
    - 2. Termination bars: 18-gauge x 1-inch wide flat galvanized steel straps – or - pre-formed aluminum bars manufactured specifically for the purpose of anchoring or terminating roofing membranes to a vertical wall.

- G. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.
- H. Metal Flashing Sheet: Metal flashing sheet is specified in Division 7 Section "Sheet Metal Flashing and Trim."
- I. Self-Adhering Membrane: See Division 07 Specification "Sheet Metal Flashing and Trim".

## 2.07 SUBSTRATE BOARDS

- A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/2 inch thick.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Georgia-Pacific Corporation; Dens Deck Prime.
    - b. Approved Equal.
  - 2. Fasteners: Factory-coated steel fasteners and metal plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening substrate board to roof deck.

## 2.08 BUR VAPOR RETARDER

- A. Glass-Fiber Felt: ASTM D 2178, Type IV, asphalt-impregnated, glass-fiber felt; two plies.
  - 1. Malarkey "500 Ply 4" fiberglass ply sheet.
  - 2. Or by Siplast, to meet or exceed Malarkey Specifications.

## 2.09 ROOF INSULATION

- A. General: Provide preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces. The R-value for calculation purposes for Polyisocyanurate insulation is to be R-5.6 per inch thickness.
  - 1. Available Manufacturers:
    - a. Atlas Roofing Corporation.
    - b. Firestone Building Products Company.
    - c. Hunter Panel, Inc.
    - d. Johns Manville International, Inc.
    - e. RMAX.
    - f. Approved equal.

2. Thickness: As indicated.
  3. Maximum thickness per layer: 3.0 inches, UON.
  4. Maximum dimension: 4 feet by 4 feet.
- C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to form a minimum finished slope of 1/4 inch per 12 inches (1:48), unless otherwise indicated. See drawings for specific info and thickness at roof drain.
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.
- E. Note that Type 2 EPS insulation is acceptable for crickets only on this project. Installation and adhesion per manufacturer's instructions. Molded-Polystyrene Board (EPS) Insulation: ASTM C 578 Type II, 1.35-lb/cu. ft. minimum density.
1. Available Manufacturers:
    - a. Insulfoam, Inc.
    - b. Approved equal.
  2. Maximum dimension: 4 feet by 4 feet

## 2.10 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Cold-Applied Insulation Adhesive Roofing manufacturer's recommended bead-applied, low-rise, one- or multi-component urethane adhesive, tested by manufacturer for required pullout strength, and acceptable to roofing manufacturer.
1. Basis-of-Design Product: Subject to compliance with requirements, provide:
    - a. One-Step Membrane Adhesive" WTT Systems - Roofing Division, Millennium Adhesive Company, 888-564-9733.
    - b. Approved Equal.
- C. Insulation Cant Strips: ASTM C 208, Type II, Grade 1, cellulosic-fiber insulation board.
1. Height: 4", typical.
- D. Tapered Edge Strips: ASTM C 208, Type II, Grade 1, cellulosic-fiber insulation board.
- E. Substrate Joint Tape: 8-inch-wide minimum, coated, glass-fiber reinforced base sheet. Malarkey 501 or approved equal.
- F. Low expansion foam insulation: "Enerfoam" or "Froth-Pak" by Dow Chemical, Inc.; or approved equal.

## 2.11 COVER BOARD

- A. Wood Fiberboard: ASTM C 208, Type II, Grade 1, Cellulosic-fiber insulation board of fibrous-felted wood fiber or other cellulosic-fiber and water-resistant binders, asphalt impregnated on all six surfaces, chemically treated to resist deterioration; acceptable to the roofing materials manufacturer.
  - 1. Available Manufacturers:
    - a. Firestone Building Products, Inc.
    - b. Georgia-Pacific Corporation.
    - c. Knight-Celotex Corporation.
    - d. Temple-Inland.
    - e. Approved equal.
  - 2. Thickness: 1/2-inch.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  - 1. Verify that roof openings and penetrations are in place, set and braced and roof drains are securely clamped or secured in place.
  - 2. Verify that cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Roof drains are to be set on curbs and cannot be supported by roof insulation.
  - 4. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

### 3.03 INSTALLATION, GENERAL

- A. Comply with built-up roofing manufacturer's written instructions.

- B. Asphalt Heating: Heat asphalt to its equiviscous temperature, measured at the mop cart or mechanical spreader immediately before application. Circulate asphalt during heating. Do not raise asphalt temperature above equiviscous temperature range more than one hour before time of application. Do not exceed asphalt manufacturer's recommended temperature limits during asphalt heating. Do not heat asphalt within 25 deg F of flash point. Discard asphalt maintained at a temperature exceeding finished blowing temperature for more than 4 hours.

- 1. Apply hot roofing asphalt within plus or minus 25 deg F of equiviscous temperature.

### 3.04 SUBSTRATE BOARD INSTALLATION

- A. Install GWB substrate with long joints in continuous straight lines, perpendicular to steel decking flutes, with end joints staggered between rows. Screw fasten to resist uplift pressure at corners, perimeter, and field of roof.
- B. Substrate-Joint Penetrations: Tape GWB substrate joints to prevent roofing asphalt and adhesives from penetrating substrate joints, entering building, or damaging built-up roofing components or adjacent building construction.

### 3.05 VAPOR-RETARDER INSTALLATION

- A. Start application of vapor retarder at the low point of the roof.
- B. Install 2 glass-fiber felt plies, lapping each sheet 19 inches over preceding sheet. Install felts shingle fashion. Embed each sheet in a solid mopping of hot roofing asphalt. Glaze-coat completed surface with hot roofing asphalt. Apply hot roofing asphalt at a rate of 20-lb/100 sq. ft., plus or minus 25 percent. No glaze coat if using cold liquid adhesive.
- C. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into roofing system and to keep asphalt from entering the building.
  - 1. At pipe, conduit, and other penetrations through the vapor retarder, seal the element to the built-up membrane with strips of SBS modified self-adhering membrane.

### 3.06 INSULATION INSTALLATION

- A. Coordinate installing roofing system components so insulation is not exposed to moisture or left exposed at the end of the workday.
- B. Comply with built-up roofing manufacturer's written instructions for installing roof insulation.
- C. Install two or more layers of insulation under area of roofing to achieve required thickness indicated. Install with all joints of each succeeding layer staggered from joints of previous layer a minimum of 12 inches in each direction.
- D. Install insulation with long joints of insulation in a continuous straight line with end joints staggered a minimum of 12 inches in each direction between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4-inch with insulation.



1. Cut and fit insulation within 1/4-inch of nailers, projections, and penetrations.
- E. Adhered Polyisocyanurate Insulation: Install each layer of insulation and adhere to substrate as follows:
1. Contractor's option to adhere with hot asphalt or cold adhesive as approved by the membrane manufacturer.
  2. Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place until adhesive sets.
  3. Adhere insulation to resist uplift pressure at corners, perimeter, and field of roof.
- F. Install tapered insulation under area of roofing to conform to slopes indicated.
- G. Install tapered edge strips at roof drains and drainage scuppers or as indicated.
- H. Adhered Coverboard: Install coverboards and adhere to insulation substrate as follows:
1. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Stagger coverboard joints from joints in insulation below a minimum of 12 inches in each direction.
  2. Set coverboard in ribbons of bead-applied insulation adhesive, loosely butting cover boards together. Firmly press and maintain coverboard in place with adequate pressure until cover board is bonded to insulation.
  3. Adhere cover boards to resist uplift pressure at corners, perimeter, and field of roof.
  4. Tape coverboard joints to prevent roofing asphalt from penetrating joints, and damaging insulation below.
- I. Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of built-up roofing with vertical surfaces or angle changes greater than 45 degrees.

### 3.07 BUILT-UP ROOFING INSTALLATION, GENERAL

- A. Install roofing membrane according to roofing manufacturer's written instructions and applicable recommendations of ARMA/NRCA's "Quality Control Guidelines for the Application of Built-up Roofing."
1. Install roofing system according to NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" and requirements in this Section. To comply with Malarkey system M5-CI-BHC-H or by Siplast, to meet or exceed Malarkey Specifications.
- B. Asphalt Fume Control: Contractor to place asphalt kettle in a location that will limit the entrainment of roofing odors into the occupied facilities. Asphalt kettles to be configured with an after-burner (ie: a closed-manufactured fume control system).
1. Asphalt Fume Control System: "Emissions Eliminator K02355" by Cleasby Manufacturing Company Inc., 1414 Bancroft Ave., San Francisco, CA 94124, phone 415-822-9147.
  2. Approved equal.

- C. Cooperate with testing and inspecting agencies or personnel engaged or required to perform services for installing or testing built-up roofing systems.
- D. Where roof slope exceeds 3/4 inch per 12 inches, install built-up roofing sheets parallel with slope.
- E. Coordinate installation of roofing so insulation and other components of built-up roofing not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt with joints and edges sealed.
  - 2. Complete terminations and base flashings and provide temporary seals daily to prevent water from entering completed sections of roofing system.
  - 3. Remove and discard temporary seals before beginning work on adjoining roofing.
- F. Asphalt Heating: Heat roofing asphalt and apply within plus or minus 25 deg F of equiviscous temperature (EVT) unless otherwise required by roofing system manufacturer. Do not raise roofing asphalt temperature above equiviscous temperature range more than one hour before time of application. Do not exceed roofing asphalt manufacturer's recommended temperature limits during roofing asphalt heating. Do not heat roofing asphalt to within 25 deg F of flash point. Discard roofing asphalt maintained at a temperature exceeding finished blowing temperature for more than 4 hours.
- G. Substrate-Joint Penetrations: Prevent roofing asphalt and adhesives from penetrating substrate joints, entering building, or damaging built-up roofing components or adjacent building construction.

### 3.08 ROOFING MEMBRANE INSTALLATION

- A. Install one lapped course of base sheet, extending sheet over and terminating beyond cants. Adhere base sheet in a solid mopping of hot roofing asphalt applied at rate required by roofing system manufacturer.
- B. Install three ply sheets starting at low point of roofing system. Align ply sheets without stretching. Shingle side laps of ply sheets uniformly to achieve required number of plies throughout thickness of roofing membrane. Shingle in direction to shed water. Extend ply sheets over and terminate beyond cants.
  - 1. Embed each ply sheet in a solid mopping of hot roofing asphalt applied at rate required by roofing manufacturer, to form a uniform membrane without ply sheets touching.
- C. Cap Sheet: Install lapped granulated cap sheet starting at low point of roofing. Offset laps from laps of preceding ply sheets and align cap sheet without stretching. Lap in direction to shed water over the laps. Extend cap sheet over and terminate beyond cants.
  - 1. Ensure that cap sheet is adhered in asphalt within 25 degrees above or below the EVT of the asphalt.

2. Embed cap sheet in a solid mopping of hot roofing asphalt applied at rate required by built-up roofing manufacturer.
3. Adhere granules matching color of cap sheet at all locations where asphalt or mastic is exposed on the surface of the cap sheet.

### 3.09 FLASHING AND STRIPPING INSTALLATION

- A. Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
  1. Base Sheet Application: Sprinkle mop, press in, and mechanically fasten a base sheet to walls and parapets.
  2. Backer Sheet Application: Adhere backer sheet to base sheet at walls or parapets in a solid mopping of hot asphalt.
  3. Flashing Sheet Application: Adhere flashing sheet in a solid mopping of hot roofing asphalt. Apply hot roofing asphalt to back of flashing sheet if recommended by roofing system manufacturer.
  4. Install Flashing Sheet in three-foot widths with laps aligned vertically.
  5. Adhere the backer and flashing sheets onto the base flashings after the field plies have been installed.
- B. Extend base flashing up walls a minimum of 8 inches minimum above roofing membrane and 4 inches minimum onto field of roofing membrane, or farther as indicated. Extend base flashings to top of parapets.
- C. Mechanically fasten the top of the base flashing securely as indicated or alternately with 1-inch metal cap nails 3-inches OC at terminations and perimeter of roofing.
  1. Seal top termination of base flashing with a strip of glass-fiber fabric set in asphalt roofing cement and sealed with asphalt mastic. (3 course seal)
- D. Seal all inside and outside corners with a strip of glass-fiber fabric set in asphalt roofing cement and sealed with asphalt mastic. (3 course seal). Embed color matching granules in the surface of exposed mastic.
- E. Install stripping, according to roofing system manufacturer's written instructions, where metal flanges and edgings are set on built-up roofing.
  1. Built-up Stripping: Prime metal surfaces with asphalt primer. Install stripping of not less than two roofing membrane base ply sheets, setting each ply in a continuous coating of asphalt roofing cement or in a solid mopping of hot roofing asphalt, and extend onto roofing membrane 4 inches and 6 inches, respectively.
- F. Roof Drains: Roof drains are to have a sump installed around the drain bowl as indicated. The maximum slope into the roof drain is to be not greater than 1 inch in 12 inches.
- G. Roof Drains: Set 30-by-30-inch 4 lb lead flashing in bed of asphalt roofing cement on completed roofing membrane. Prime surface of metal flashing with asphalt primer. Cover metal flashing with stripping and extend a minimum of 4 inches beyond edge of metal

flashing onto field of roofing membrane. Install cap sheet ply. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.

1. Install stripping of not less than two roofing membrane base ply sheets, each set in a continuous coating of asphalt roofing cement or in a solid mopping of hot roofing asphalt.

### 3.10 LOW EXPANSION FOAM INSULATION

A. Low expansion foam insulation at miscellaneous locations. At locations with voids under several inches in width, fill joint opening with low expansion foam insulation. Apply in multiple layers to prevent distortion or excess pressures. Begin application with the first layer applied to the bottom of the joint. Allow each application to cure independently before application of subsequent layers of low expansion foam insulation. Trim insulation slightly below surface.

1. Low-expansion foam insulation is not to be exposed to the interior of the building.
2. Apply expanding foam insulation according to manufacturer's written instructions.

### 3.11 FIELD QUALITY CONTROL

A. Testing Agency: Owner may engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.

B. Test Cuts: Before flood coating and surfacing built-up roofing membrane, test specimens may be removed to evaluate problems observed during quality-assurance inspections of roofing membrane as follows:

1. Approximate quantities of components within roofing membrane will be determined according to ASTM D 3617.
2. Test specimens will be examined for interply voids according to ASTM D 3617 and to comply with criteria established in Appendix 3 of ARMA/NRCA's "Quality Control Guidelines for the Application of Built-up Roofing."

C. Final Roof Warranty Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to OWNER.

1. Notify OWNER 48 hours in advance of date and time of inspection.

D. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.

E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

### 3.12 PROTECTING AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for

deterioration and damage, describing its nature and extent in a written report and provide to OWNER.

- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

3.13 ROOFING INSTALLER's WARRANTY

- A. A separate warranty is required for each building.
- B. WHEREAS <NAME> of <ADDRESS>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
1. Owner: University of Alaska, Anchorage
  2. Address: 3211 Providence Drive,
  3. Anchorage, Alaska, 99508
  4. Building Name & Address: **Professional Studies Building**
  5. \_\_\_\_\_
  6. \_\_\_\_\_
  7. Area of Work: Roof.
  8. Acceptance Date: \_\_\_\_\_
  9. Warranty Period: 2 years.
  10. Expiration Date: \_\_\_\_\_
- C. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- D. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- E. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. lightning;
    - b. fire;
    - c. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - d. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work, unless constructed by roofing installer;
    - e. vapor condensation on bottom of roofing; and
    - f. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
  2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof has been paid by Owner or by another responsible party so designated.
  3. The Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents, resulting from leaks or faults or defects of work.

4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void, unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. The Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

F. IN WITNESS THEREOF, this instrument has been duly executed this \_\_\_\_day of November, 20\_\_.

1. Authorized Signature:
2. Name:
3. Title:

END OF SECTION

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## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Roof tear-off.
  - 2. Temporary roofing membrane.
- B. Related Sections include the following:
  - 1. Division 2 Section "Minor Demolition for Remodeling".
  - 2. Division 6 Section "Rough Carpentry".
  - 3. Division 7 Section "Built-Up Roofing".
  - 4. Division 23 Section "Basic Mechanical Materials and Methods".
  - 5. Division 26 Section "Electrical General Requirements".

### 1.03 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Existing Membrane Roofing System: Roof ballast, layers of rigid insulation, and built-up asphalt roofing membrane.
- C. Roof Tear-Off: Removal of existing roofing system from deck surface up.
- D. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- E. Existing to Remain: Existing items of construction that are not indicated to be removed.

### 1.04 SUBMITTALS

- A. Product Data: For each type of product indicated.

1.05 QUALITY ASSURANCE

- A. Reroofing Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to roofing system including, but not limited to, the following:
1. Meet with Owner; Architect, Roofing Installer including Project Manager, Superintendent, and Foreman.
  2. Review methods and procedures related to roofing system tear-off and replacement including, but not limited to, the following:
    - a. Reroofing preparation, including membrane roofing system manufacturer's written instructions.
    - b. Temporary protection requirements for existing roofing system that is to remain during and after installation.
    - c. Existing roof drains and roof drainage during each stage of reroofing, and roof drain plugging and plug removal requirements.
    - d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
    - e. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
    - f. Structural loading limitations of deck during reroofing.
    - g. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect reroofing.
    - h. HVAC shutdown and sealing of air intakes.
    - i. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
    - j. Procedures for unexpected discovery of asbestos-containing materials.
    - k. Existing conditions that may require notification of Architect before proceeding.
    - l. Combine meeting discussion items with those listed in Section 07 51 13, 1.09, D.

1.06 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours notice of activities that may affect Owner's operations.
1. Coordinate work activities daily with Owner so Owner can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area.
- B. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- C. Maintain access to existing walkways, doorways, corridors, and other adjacent occupied or used facilities.

- D. Owner assumes no responsibility for condition of areas to be reroofed.
- E. Limit construction loads on roof to 100 lbs/wheel for rooftop equipment wheel loads and 60 lbs/sq. ft. for uniformly distributed, temporary loads.
- F. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.

## PART 2 - PRODUCTS

### 2.01 TEMPORARY ROOFING MATERIALS

- A. Base Sheet: ASTM D 4601, Type II, nonperforated, asphalt-impregnated and -coated, glass-fiber sheet.
- B. Glass-Fiber Felts: ASTM D 2178, Type IV, asphalt-impregnated, glass-fiber felt.
- C. Asphalt Primer: ASTM D 41.
- D. Roofing Asphalt: ASTM D 312, Type III.

### 2.02 AUXILIARY REROOFING MATERIALS

- A. General: Auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new membrane roofing system.

## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Protect existing membrane roofing system that is indicated not to be reroofed, where work or traffic will occur and could damage roof system.
- B. Coordinate with Owner to shut down air intake equipment in the vicinity of the Work. Cover air intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- C. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- D. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.

1. If roof drains will be temporarily blocked or unserviceable due to roofing system removal or partial installation of new membrane roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing membrane roofing system components that are to remain.
- E. Verify that rooftop utilities and service piping have been shut off before commencing Work.

### 3.02 ROOF TEAR-OFF

- A. General: Notify Owner each day of extent of roof tear-off proposed.
- B. Roof Tear-Off: Remove existing roofing membrane, insulation, and other membrane roofing system components down to the deck and discard.
1. Remove roofing fasteners from the deck.
  2. Clean dust and debris from the roof deck after the roof membrane and underlayment removal process is complete.
  3. Remove excess asphalt from deck. A maximum of 15 lb/100 sq. ft. of asphalt is permitted to remain on steel decks.
  4. Coordinate with Owner's inspector to schedule times for deck inspections immediately after membrane removal.

### 3.03 DECK PREPARATION

- A. Inspect deck after tear-off of membrane roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify owner's representative. Do not proceed with installation until directed by owner's representative.
- C. If deck surface is not suitable for receiving new roofing, or if structural integrity of deck is suspect, immediately notify owner's representative. Do not proceed with installation until directed by owner's representative.

### 3.04 EXISTING BASE FLASHINGS

- A. Remove all existing base flashings around parapets, curbs, walls, and penetrations.
1. Clean substrates of contaminants such as asphalt, sheet materials, dirt and debris.
- B. Do not damage metal counterflashings that are indicated to remain. Replace metal counterflashings damaged during removal with counterflashings specified in Division 7 Section "Sheet Metal Flashing and Trim."

3.05 DISPOSAL

- A. Collect and place demolished materials in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
  - 1. Storage or sale of demolished items or materials on-site will not be permitted.
- B. Transport demolished materials off of Owner's property and legally dispose of them.

END OF SECTION

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PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following:
  - 1. Pre-finished coping and other protective flashings.
  - 2. Formed sheet metal fabrications.
  - 3. Miscellaneous metal roof and wall flashings.
  - 4. Scuppers.
- B. RELATED WORK Related Sections include the following:
  - 1. Division 6 Section "Rough Carpentry".
  - 2. Division 7 Section "Built-up Roofing".
  - 3. Division 7 Section "Joint Sealants".

1.03 REFERENCES

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
- B. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M

1.04 SYSTEM DESCRIPTION

- A. Work of this Section is to physically protect base flashings, parapets, and penetrations from damage that would permit water leakage to building interior, roof system, roof structure, or into roof insulation. Miscellaneous metal flashing is also included.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
- B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

- C. Applicator: Company specializing in sheet metal flashing work with three years minimum experience. Provide documentation stating the above.

#### 1.06 SUBMITTALS

- A. Submit product data.
- B. Submit sample of the finish warranty and submit the final warranty signed by the manufacturer.
- C. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work. Include the following:
  - 1. Identification of material, thickness, weight, and finish for each item and location in Project.
  - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
- D. Samples for initial selection: Provide two each per color 2-inch x 2-inch minimum sized sample of prefinished metal illustrating typical material and finish, for color selection by Architect.

#### 1.07 STORAGE AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

#### 1.08 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
- B. Finish Warranty Period: 20 years from date of Substantial Completion.



## PART 2 - PRODUCTS

### 2.01 SHEET MATERIALS

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
  - 1. Gauge: As indicated on the drawings and as listed following.
- B. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
  - 1. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, structural quality.
  - 2. Surface: Smooth, flat.
  - 3. Exposed Coil-Coated Finish:
    - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  - 4. Color: Color selection to be by Architect from the manufacturer's full range. Note: Architect will select and coordinate metal flashing colors with color selection of Metal Wall Panels.
  - 5. Manufacturers:
    - a. AEP Span.
    - b. ColorKlad by Ryerson.
    - c. Metal Sales.
    - d. Una-Clad by Firestone.
    - e. Approved equal.
  - 6. For specific sheet metal thickness use the gauge indicated.

### 2.02 UNDERLAYMENT MATERIALS (SAM)

- A. Self-Adhering, Polyethylene-Faced Sheet: ASTM D 1970, 40 mils thick minimum, consisting of slip-resisting polyethylene-film reinforcing and top surface laminated to SBS-modified asphalt adhesive, with release-paper backing; cold applied.
  - 1. Products:
    - a. Grace, W. R. & Co.; Grace Ice and Water Shield.
    - b. Approved Equal
  - 2. Granule surface or internally reinforced sheet products are not acceptable.

### 2.03 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
  - 1. General: Series 300 stainless steel blind fasteners or self-drilling screws, gasketed, with hex-washer head.
    - a. Exposed Fasteners: Heads matching color of sheet metal using factory-applied fluoropolymer coating, with soft EPDM gaskets.
    - b. Blind Fasteners: High-strength stainless steel rivets suitable for metal being fastened.
- C. Solder (at scuppers & VTR's only):
  - 1. For Zinc-Coated (Galvanized) Steel: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.
- D. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin foam or closed-cell laminated polyethylene; minimum 1-inch thick, flexible-closure strips; cut or premolded to match sheet metal roofing profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- E. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight. See Section 07 92 00.

#### 2.04 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.
  - 1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
  - 2. Obtain field measurements for accurate fit before shop fabrication.
  - 3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
  - 4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant.

- D. Fabricate hold down cleats and starter strips of material indicated, minimum 2 inches wide, interlockable with sheet.
- E. Do not use graphite pencils to mark metal surfaces.
- F. Form pieces in longest practical lengths.
- G. Hem exposed edges on underside minimum 1/2-inch; miter and seam corners.
- H. Fabricate vertical faces with bottom edge formed outward 3/4-inch and hemmed to form drip.

## 2.05 SHEET METAL FABRICATIONS

- A. Copings: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg. Miter corners, seal watertight.
  - 1. Coping Profile: As indicated.
  - 2. Joint Style: Butt, with 12-inch- wide, concealed backup plate.
  - 3. Fabricate from the Following Materials:
  - 4. Material: Pre-finished Aluminum-Zinc Alloy-Coated Steel: 24-gauge.
    - a. Cleats: Galvanized Steel: 22-gauge.
- B. Counterflashings and trim: Fabricate from the following materials:
  - 1. Fabricate from the Following Materials:
    - a. Pre-finished Aluminum-Zinc Alloy-Coated Steel: 24-gauge.
    - b. Cleats: Same as for coping.
- C. Roof-Drain Flashing: Fabricate from the following materials:
  - 1. Roof drain flashing: 4 lb lead sheet.
- D. Roof Penetration flashing: Fabricate from the following materials:
  - 1. Fabricate from the Following Materials:
    - a. Vent through the roof flashing: 4 lb lead sheet, fully soldered. Provide a removable a 24 ga galvanized storm collar as indicated.

## 2.06 MISCELLANEOUS SHEET METAL FABRICATIONS

- A. Roof scuppers: Fabricate from the following materials:
  - 1. Fabricate from the Following Materials:
    - a. Galvanized Steel: 20-gauge, fully soldered.
- B. Roof scupper exterior flashings around sides of scupper: Fabricate from the following materials:

1. Fabricate from the Following Materials:
  - a. Pre-finished Aluminum-Zinc Alloy-Coated Steel: 24-gauge.

### PART 3 - EXECUTION

#### 3.01 INSPECTION AND PREPARATION

- A. Verify conditions and critical dimensions affecting fabrication and installation of work of this Section.
- B. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, and cant strips in place, and nailing strips located.
- C. Verify membrane termination and base flashings are in place, sealed, and secure.
- D. Verify that self-adhering membrane has been installed over the top of all curbs and parapets.
- E. Beginning of installation means acceptance of existing conditions.

#### 3.02 UNDERLAYMENT INSTALLATION

- A. General: Install underlayment as indicated on Drawings.
- B. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Apply primer if required by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.
- C. Separate metal products from preservative treated wood products with a layer of Self-Adhering Sheet Underlayment.

#### 3.03 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing, trim, and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder and sealant.
  2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

3. Space cleats not more than 12 inches apart. Anchor each cleat with a minimum of two fasteners.
  4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
  5. Torch cutting of sheet metal flashing and trim is not permitted.
  6. Do not use graphite pencils to mark bare metal surfaces.
- B. Metal Protection: Sheet metal flashing and trim is to be separated with self-adhering material when in contact with aluminum, preservative treated wood, cementitious construction or other corrosive substrates.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate wood sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- E. Seal joints as shown and as required for watertight construction.
1. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealers."
- F. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches.
1. Do not solder Pre-Finished Aluminum-Zinc Alloy-Coated Steel.
  2. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

### 3.04 INSTALLATION

- A. Conform to approved shop drawing details.
- B. All flashings shall be sloped to drain positively, minimum 3/4-inch per foot.
- C. Install hold down cleats before starting installation.
- D. Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations shown. The use of fasteners which penetrate low-sloped horizontal surfaces of metal flashings will not be accepted.
- E. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles and installation weathertight.
- F. Copings: Anchor to resist uplift and outward forces according to recommendations in SMACNA's "Architectural Sheet Metal Manual" and as indicated.

1. At coping, install coping pieces with 1/8-inch expansion allowance between ends.
  2. Interlock exterior bottom edge of coping with continuous cleat anchored to substrate at 12-inch centers.
  3. Anchor interior leg of coping with washers and screw fasteners at 12-inch centers.
- G. Parapet Scuppers: Install scuppers where indicated through parapet. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
1. Install scupper closure flashing in a shingle fashion to divert water out of the parapet wall.
  2. Anchor scupper closure trim flange to exterior wall and seal with elastomeric sealant to scupper.
- H. At flashing assemblies supporting items on top of curbs and parapets, fabricate flashing assembly to maintain positive drainage and support superimposed loads.
- I. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints a minimum of 4 inches and bed with sealant, and secure 12-inches on center or as indicated.
- J. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof as indicated. Install watertight soldered cap to flashing.

### 3.05 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Opening Flashings in Frame Construction: Install continuous head, sill, jamb, and similar flashings to extend 4-inches beyond wall openings.

### 3.06 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturers written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

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## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Non-fire rated sealants and backing materials.
  - 2. Joint sealants between metal panels and metal flashing.
  - 3. Vapor retarder sealant.
- B. Related sections include the following:
  - 1. Division 7 Section "Built-up Roofing".
  - 2. Division 7 Section "Sheet Metal Flashing and Trim".
  - 3. Division 7 Section "Metal Wall Panels".

### 1.03 REFERENCES

- A. ASTM C 1193 – Standard Guide for use of Joint Sealants.

### 1.04 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

### 1.05 SUBMITTALS

- A. Submit shop drawings, product data, Material Safety Data Sheets (MSDS) and samples.
- B. Submit samples of sealant colors.
- C. Submit manufacturer's surface preparation and installation instructions.

### 1.06 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.

2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

#### 1.07 SYSTEM REQUIREMENTS

- A. Building Sealants: Work shall be water tight, and resist passage of moisture and vapor.
- B. Building Movement: Installed systems shall be flexible to allow for normal movement of building and penetrating items without affecting the adhesion or integrity of the system.
- C. All materials shall be free of asbestos, and emit no toxic fumes or vapors.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

#### 2.02 URETHANE SEALANT MATERIALS

- A. Polyurethane base, single component, nonsag, urethane joint sealant: ASTM C 920, Type S, Grade NS, Class 100/50, for Use NT. Non-staining; for use at all exterior locations:
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Bostik. Bostik Findley; Chem-Calk 900.
    - b. Bostik Findley; Chem-Calk 915.
    - c. Bostik Findley; Chem-Calk 916 Textured.
    - d. Schnee-Morehead, Inc.; Permathane P7100.
    - e. Schnee-Morehead, Inc.; Permathane SM7108.
    - f. Sika Corporation, Construction Products Division; Sikaflex - 15LM
    - g. Tremco, Inc.; DyMonic FC.
    - h. Tremco, Inc.; Vulkem 921.
    - i. Tremco, Inc.; Vulkem 931.
    - j. Substitutions: Approved equal.
- B. Silicone Sealant is not to be used for exterior roofing or flashing.

## 2.03 VAPOR RETARDER SEALANT

- A. Vapor Retarder Sealant: Manufacturer's standard non-skinning, non-hardening, synthetic rubber acoustical sealant; CAN/CGSB 19.21 M87.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Tremco Corporation; "Acoustical Sealant".
    - b. Approved Equal.

## 2.04 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

## 2.05 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.01 INSPECTION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
    - b. Exterior insulation and finish systems.
  - 3. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal.
    - b. Glass.
- B. Verify that joint shaping materials and release tapes are compatible with sealant.
- C. Examine joint dimensions and size materials to achieve required width/depth ratios.
- D. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- E. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.03 INSTALLATION

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. General: Apply sealant free of air pockets, foreign embedded matter, ridges, and sags.
- C. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- D. At sheetmetal flashing joints, provide double beads of sealant to seal lap joints.

- E. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- F. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- G. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- H. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  - 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
  - 4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
  - 5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.
    - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.
- I. Acoustical Sealant Installation: At vapor retarder and sound-rated assemblies and elsewhere as indicated, seal construction at perimeters, at control joints, at the interior side of building joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations.

### 3.04 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.05 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION

## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. This Section includes painting for the following:
  - 1. Metal fabrications paint.
  - 2. Interior Paint.
  - 3. Touch up painting.
- B. Related Sections include the following:
  - 1. Division 5 Section "Metal Fabrications".
  - 2. Division 7 Section "Sheet Metal Flashing and Trim".

### 1.03 REFERENCES

- A. ANSI/ASTM D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products.

### 1.04 DEFINITIONS

- A. Conform to ANSI/ASTM D 16 for interpretation of terms used in this Section.

### 1.05 QUALITY ASSURANCE

- A. Product Manufacturer: Company specializing in manufacturing quality paints and finish products with five years experience.
- B. Applicator: Company specializing in commercial painting and finishing with three years documented experience.

### 1.06 REGULATORY REQUIREMENTS

- A. Conform to the current adopted International Building Code for flame/fuel/smoke rating requirements for finishes.

1.07 SUBMITTALS

- A. Provide product data on all finishing products.
- B. Submit manufacturer's application instructions.
- C. Submit color samples for selection by the Architect.
- D. Submit two samples minimum 1-inches x 2-inches in size illustrating range of colors available for each surface finishing product scheduled.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site per manufacturer's instructions.
- B. Store and protect products per manufacturer's instructions.
- C. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.
- D. Container labeling to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.
- E. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in well-ventilated area, unless required otherwise by manufacturer's instructions.
- F. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.09 ENVIRONMENTAL REQUIREMENTS

- A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 55 degrees F for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.
- B. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.
- C. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.
- D. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.



## PART 2 - PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS - PAINT PRODUCTS

1. Benjamin Moore & Co.
2. Sherwin-Williams.
3. PPG Pittsburg Paints.
4. Pratt & Lambert.
5. Approved equal.

### 2.02 MATERIALS

- A. Coatings: Ready mixed, except field-catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
- B. Coatings: Good flow and brushing properties; capable of drying or curing free of streaks or sags.
- C. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

### 2.03 FINISHES

- A. Refer to schedule at end of Section for surface finish schedule.
- B. Refer to drawings for locations and areas.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.
  1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
  2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

### 3.02 PREPARATION

- A. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- B. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- C. Correct minor defects and clean surfaces which affect work of this Section.
- D. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
  - 1. Provide barrier coats over incompatible primers or remove and reprime.
  - 2. **GWB:** Clean surfaces of all dirt, oil, and other foreign substances with mild water based cleaning solution formulated to clean interior painted wall surfaces.
  - 3. **Wood:** Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
    - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
    - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including trim and siding.
  - 4. **Ferrous Metals:** Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, rust, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
    - a. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming to remove all traces of oxidation.
    - b. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as the shop coat.
  - 5. **Galvanized Surfaces:** Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- E. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
  2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
  3. Use only thinners approved by paint manufacturer and only within recommended limits.
- F. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

### 3.03 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint type, surface treatments, and finishes are indicated in the paint schedules. Colors are to be selected by the Architect.
  2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
  3. Provide finish coats that are compatible with primers used.
  4. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
  2. Omit primer over metal surfaces that have been shop primed and touchup painted.
  3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
  4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
  2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.

3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- F. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- G. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

#### 3.04 CLEANING

- A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.
- B. During progress of Work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Collect cotton waste, cloths, and material that may constitute a fire hazard, place in closed metal containers and remove daily from site.

#### 3.05 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- C. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
  1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.
- D. Remove empty paint containers from site.

3.06 PAINT SCHEDULE

- A. Finish, colors, ashen and gloss levels and matches are to be approved by the Architect and the Project Manager.
- B. Interior and Exterior, Non-metallic Surfaces.
  - 1. Primer Coat: Acrylic latex, factory formulated as a primer for the particular substrate, 1 coat.
  - 2. Finish Coat: Acrylic latex enamel, 2 coats.
  - 3. Color & Sheen: To be selected by Architect from manufacturer's full range of color samples.
- C. Exterior, Metallic Surfaces: Primer and finish coats are to be commercial grade and be factory formulated to perform in the environment and on the material to be finished.
  - 1. Primer Coat for Bare Steel: Alkyd metal primer, Zinc Rich, 1 coat.
  - 2. Primer Coat for Galvanized Steel: Acrylic galvanized iron primer, 1 coat.
  - 3. Finish Coat: Exterior Alkyd Enamel, 2 coats.
  - 4. Color & Sheen: To be selected by Architect from manufacturer's full range of color samples.

END OF SECTION

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## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes preformed, rigid and flexible pipe insulation; insulating cements; field-applied jackets; accessories and attachments; and sealing compounds.
- B. Related Sections include the following:
  - 1. Division 7 Section "Building Insulation".
  - 2. Division 7 Section "Built-up Roofing".
  - 3. Division 22 Section "Rain Leader Piping".
  - 4. Division 23 Section "Basic Mechanical Materials and Methods".

### 1.3 SUBMITTALS

- A. Product Data: Identify thermal conductivity, thickness, and jackets (both factory and field applied, if any), for each type of product indicated.
- B. Material Test Reports: From a qualified testing agency acceptable to authorities having jurisdiction indicating, interpreting, and certifying test results for compliance of insulation materials, sealers, attachments, cements, and jackets with requirements indicated. Include dates of tests.
- C. Installer Certificates: Signed by the CONTRACTOR certifying that installers comply with requirements.

### 1.4 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: As determined by testing materials identical to those specified in this Section according to ASTM E84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and sealer and cement material containers with appropriate markings of applicable testing and inspecting agency.
  - 1. Insulation Installed Indoors: Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Packaging: Ship insulation materials in containers marked by manufacturer with appropriate ASTM specification designation, type and grade, and maximum use temperature.

1.6 COORDINATION

- A. Coordinate size and location of supports, hangers, and insulation shields.
- B. Coordinate clearance requirements with piping Installer for insulation application.

1.7 SCHEDULING

- A. Schedule insulation application after testing piping systems. Insulation application may begin on segments of piping that have satisfactory test results.

PART 2 - PRODUCTS

2.1 INSULATION MATERIALS

- A. Mineral-Fiber, Pipe Insulation: Mineral or glass fibers bonded with a thermosetting resin. Semi-rigid board material with factory-applied FSK jacket complying with ASTM C1393, Type II or Type IIIA Category 2, or with properties similar to ASTM C612, Type IB. Nominal density is 2.5 lb/cu. ft. or more. Thermal conductivity (k-value) at 100 degrees F is 0.29 Btu x in. / h x sq. ft. x degrees F or less.

- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
  - a. CertainTeed Corp.; CrimpWrap.
  - b. Johns Manville; MicroFlex.
  - c. Knauf Insulation; Pipe and Tank Insulation.
  - d. Manson Insulation Inc.; AK Flex.
  - e. Owens Corning; Fiberglas Pipe and Tank Insulation.
  - f. Approved equal.

2.2 FIELD-APPLIED JACKETS

- A. Standard PVC Fitting Covers: Factory-fabricated fitting covers manufactured from 20-mil-thick, high-impact, ultraviolet-resistant PVC.
  - 1. Shapes: 45- and 90-degree, short-and long-radius elbows, tees, reducers, end caps, soil-pipe hubs and mechanical joints.
  - 2. Adhesive: As recommended by insulation material manufacturer.
  - 3. Color: White



### 2.3 ACCESSORIES AND ATTACHMENTS

- A. Vapor Retarder Sealant Cement: Provide Foster 3080 or MEI cement.
- B. Bands: 3/4 inch wide, in one of the following materials compatible with jacket:
  - 1. Stainless Steel: ASTM A666, Type 304; 0.020 inch thick.
  - 2. Galvanized Steel: 0.005 inch thick.
- C. Wire: 0.062-inch, soft-annealed, stainless steel; or 0.062-inch.
- D. Adhesives: Compatible with insulation.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation and other conditions affecting performance of insulation application.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Preparation: Clean and dry pipe and fitting surfaces. Remove materials that will adversely affect insulation application.

### 3.3 GENERAL APPLICATION REQUIREMENTS

- A. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions; with smooth, straight, and even surfaces; free of voids throughout the length of piping, including fittings, valves, and specialties.
- B. Refer to schedules at the end of this Section for materials, forms, jackets, and thicknesses required for each piping system.
- C. Use accessories compatible with insulation materials and suitable for the service. Use accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.
- D. Apply insulation with longitudinal seams at top and bottom of horizontal pipe runs.
- E. Apply multiple layers of insulation with longitudinal and end seams staggered.
- F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.
- G. Keep insulation materials dry during application and finishing.

- H. Apply insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by the insulation material manufacturer.
- I. Apply insulation with the least number of joints practical.
- J. Apply insulation over fittings and specialties, with continuous thermal and vapor-retarder integrity, unless otherwise indicated. Refer to special instructions for applying insulation over fittings and specialties.
- K. Hangers and Anchors: Where vapor retarder is indicated, seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor retarder mastic.
  - 1. Apply insulation around hangers and around anchor attachments.
  - 2. For insulation application where vapor retarders are indicated, seal vapor retarder at all penetrations with sealing compound recommended by the insulation material manufacturer.
  - 3. Install insert materials and apply insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by the insulation material manufacturer.
- L. Insulation Terminations: For insulation application where vapor retarders are indicated, taper insulation ends. Seal ends with a sealing compound specified to maintain vapor retarder.
- M. Apply adhesives and mastics at the manufacturer's recommended coverage rate.
- N. Wall and Partition Penetrations: Apply insulation continuously through walls and deck. Fill voids with low-expansion foam sealant before application of pipe insulation.

#### 3.4 MINERAL-FIBER INSULATION APPLICATION

- A. Apply insulation to straight pipes and tubes as follows: Secure each layer of preformed pipe insulation to pipe with wire, tape, or bands without deforming insulation materials.
- B. Apply insulation to fittings and elbows as follows:
  - 1. Apply pre-molded insulation sections of the same material as straight segments of pipe insulation when available. Secure according to manufacturer's written instructions.
  - 2. When pre-molded insulation elbows and fittings are not available, apply mitered sections of pipe insulation, or glass fiber blanket insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire, tape, or bands.
  - 3. Cover fittings with heavy PVC fitting covers. Overlap PVC covers on pipe insulation jackets at least 1-inch at each end. Secure fitting covers with manufacturer's attachments and accessories. Seal seams with tape and vapor retarder mastic.
- C. Apply insulation to drains as follows:
  - 1. Install fiberglass batt or foam insulation around drain bowl as indicated.
  - 2. Seal interior sheetmetal vapor retarder to drain pipe insulation jacket and to the ceiling vapor retarder or other element at interior as indicated.

### 3.5 FIELD-APPLIED JACKET APPLICATION

- A. Foil and Paper Jackets: Apply cloth jackets and lagging where indicated.
  - 1. Secure jacket to insulation with manufacturer's recommended adhesive.
  - 2. Draw jacket material smooth and tight during application of lagging.
  - 3. Seal openings, punctures, and breaks in vapor-retarder jackets and exposed insulation with vapor-retarder mastic.

### 3.6 PIPING SYSTEM APPLICATIONS

- A. Insulation materials and thicknesses are specified in schedules at the end of this Section.

### 3.7 FIELD QUALITY CONTROL

- A. Inspection: Perform the following field quality-control inspections, after installing insulation materials, jackets, and finishes, to determine compliance with requirements:
  - 1. Inspect fittings, and covers randomly selected by Architect.
- B. Insulation applications will be considered defective if sample inspection reveals noncompliance with requirements. Remove defective Work and replace with new materials according to these Specifications.
- C. Reinstall insulation and covers on fittings uncovered for inspection according to these Specifications.

### 3.8 INSULATION APPLICATION SCHEDULE, GENERAL

- A. Refer to insulation application schedules for required insulation materials, vapor retarders, and field-applied jackets.

### 3.9 EXTERIOR INSULATION APPLICATION SCHEDULE

- A. Service: Plumbing vents above the roof surface.
  - 1. Operating Temperature: -60 to 100 degrees F.
  - 2. Insulation Material: Mineral fiber.
  - 3. Insulation Thickness: Apply the following insulation thicknesses:
    - a. 1-1/2 inches thick.

### 3.10 INTERIOR INSULATION APPLICATION SCHEDULE

- A. Service: Rainwater conductors.
  - 1. Operating Temperature: 32 to 100 degrees F.
  - 2. Insulation Material: Mineral fiber.

3. Insulation Thickness: Apply the following insulation thicknesses:
    - a. Cast Iron Pipe, 3 inch to 8 inch:
      - 1) 1-1/2 inches thick: From roof drain to 10 feet downstream or to existing rainleader insulation.
      - 2) 1-inch-thick: Remainder of rainleader as required.
  4. Field-Applied Jacket: Foil and paper.
  5. Vapor Retarder Required: Yes.
  6. Finish: White.
- B. Service: Roof drain bodies.
1. Operating Temperature: -40 to 100 degrees F.
  2. Insulation Material: Mineral Fiber or polyisocyanurate insulation.
  3. Insulation Thickness:
    - a. Mineral fiber: 3 inch minimum.
    - b. Fairbanks: Additional layer of polyisocyanurate: 2.5-inch; see drawings and Section 07 51 13.
  4. Vapor Retarder: Required, see drawings and Section 07 62 00.

END OF SECTION

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, apply to this Section.
  - 1. Division 7 Section "Built-up Roofing".
  - 2. Division 7 Section "Sheetmetal Flashing and Trim".
  - 3. Division 22 Section "Pipe Insulation".
  - 4. Division 23 Section "Basic Mechanical Materials and Methods".

### 1.2 SUMMARY

- A. This Section includes replacement of existing roof drains with new roof drains; extension of plumbing vent stacks as indicated.

### 1.3 PERFORMANCE REQUIREMENTS

- A. Provide components and installation capable of producing piping systems with the following minimum working pressure ratings, unless otherwise indicated:
  - 1. Rain Leader Piping: Tested in accordance with the Uniform Plumbing Code.
  - 2. Pressure test dead-headed rain leaders.

### 1.4 SUBMITTALS

- A. Product Data: For pipe, tube, fittings, and couplings.
- B. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.
- C. Submit Field Test Reports to Architect.

### 1.5 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- B. Qualification of Contractor: Contractor or sub-contractor shall be a licensed Mechanical Contractor with a minimum of 5 years' experience in the work of this section.
- C. Requirements: Plumbing and related work shall be performed in accordance with applicable local and state building codes and regulations.

### 1.6 DELIVERY STORAGE AND HANDLING

- A. Use all means to protect the materials of this section before, during, and after installation, and to protect the work and materials of other trades.
- B. Deliver only new materials to the job site in original, unopened containers. Materials to be stored in such a manner as to be protected from rain, snow, or inclement weather. When storing materials on the roof, do not overstress the deck.
- C. In the event of damage, immediately make repairs and replacements to the approval of the consultant and at no additional cost to the Owner.

## 1.7 GUARANTEE

- A. Materials and work provided and installed as part of the work of this section shall be guaranteed in writing by the contractor. Guaranty shall require the contractor to maintain plumbing in a watertight condition without cost to the Owner for a period of 2 years after date of final payment.

## PART 2 - PRODUCTS

### 2.1 PIPING MATERIALS

- A. Refer to Part 3 "Piping Applications" Article for applications of pipe, tube, fitting, and joining materials.

### 2.2 HUBLESS CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings: ASTM A888 or CISPI 301.
- B. Shielded Couplings: ASTM C1277 and ASTM C1540 assembly of metal shield or housing, corrosion-resistant fasteners, and rubber sleeve with integral, center pipe stop.
  - 1. Heavy-Duty, Hubless-Piping Couplings: With stainless-steel shield; 4 stainless-steel bands and tightening devices.
    - a. Manufacturers:
      - (1) ANACO.
      - (2) Clamp-All Corp.
      - (3) Dallas Specialty & Mfg. Co.
      - (4) MIFAB, Inc.
      - (5) Mission Rubber Company; a division of MCP Industries, Inc.
      - (6) Stant.
      - (7) Tyler Pipe.
      - (8) Approved equal.

### 2.3 ROOF DRAINS

- A. Manufacturers:

1. Josam Co.
2. Smith, Jay R. Mfg. Co.
3. Zurn Industries, Inc.
4. MIFAB.
5. Approved equal.

B. Roof Drains: Comply with ASME A112.6.4-2003.

1. Application: Roof drain.
  - a. Body Material: Cast iron.
  - b. Dimensions of Body: 15 ¼-inches in diameter.
  - c. Combination Flashing Ring and Gravel Stop: Cast Iron, with 4 bolt locations for attachment to roof drain bowl.
  - d. Outlet: Bottom, minimum 3 inch diameter, no-hub connection.
  - e. Dome Material: Cast Iron.
  - f. Extension Collars: As required.
  - g. Underdeck Clamp: Required. As an alternate, underdeck clamps can be deleted if a "bolt-to-the-drain-body" style sump receiver is installed.
  - h. Sump Receiver: Required.
2. Application: Overflow Roof drain.
  - a. Construction: Similar to Roof drain.
  - b. Flashing Ring: High water dam required.
  - c. Drain sump: Not required.
  - d. Sump Receiver: Required.

## PART 3 - EXECUTION

### 3.1 PIPING APPLICATIONS

- A. Aboveground Rain Leader Piping: Use any of the following piping materials for each size range:
1. NPS 2 inches to NPS 6 inches: Hubless, cast-iron soil piping.
  2. Couplings: Heavy-duty, 4-banded Type 301, stainless steel.
- PIPING INSTALLATION
- A. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook", Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."
  - B. Make changes in direction for piping using appropriate branches, bends, and long-sweep bends. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction of flow is prohibited.
  - C. Do not enclose, cover, or put piping into operation until it is inspected and approved by the Authority Having Jurisdiction.
  - D. Install piping to permit valve servicing.

- E. Install piping free of sags and bends.
- F. Install piping to allow application of insulation.
- G. Install escutcheons for piping penetrations of walls and ceilings.

### 3.3 JOINT CONSTRUCTION

- A. Hubless, Cast-Iron Soil Piping Coupled Joints: Join according to CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-piping coupling joints.
  - 1. Hubless Joints: Use rubber gasket and sleeve or clamp.

### 3.4 HANGER AND SUPPORT INSTALLATION

- A. Install the following:
  - 1. Vertical Piping: MSS Type 8 or Type 42, clamps.
  - 2. Individual, Straight, Horizontal Piping Runs: According to the following:
    - a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
    - b. Longer than 100 Feet: MSS Type 43, adjustable roller hangers.
  - 3. Base of Vertical Piping: MSS Type 52, spring hangers.
  - 4. Rod diameter may be reduced 1 size for double-rod hangers, with 3/8-inch minimum rods.
- B. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters:
  - 1. NPS 2 inch: 60 inches with 3/8-inch rod.
  - 2. NPS 3 inch: 60 inches with 1/2-inch rod.
  - 3. NPS 4 inch: 60 inches with 5/8-inch rod.
  - 4. NPS 6 inch: 60 inches with 3/4-inch rod.
- C. Support horizontal piping and tubing within 12 inches of each fitting and coupling.
- D. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions.

### 3.5 CONNECTIONS

- A. Connect roof drains to rain leader piping and existing storm drainage piping. Use transition fitting to join dissimilar piping materials.
- B. Where installing piping adjacent to equipment, allow space for service and maintenance of equipment.

### 3.6 PLUMBING VENT STACKS



- A. Roof Top: Existing plumbing vent pipes (stacks) shall extend a minimum of 12-inches above the finished surface height of the new roof system. Modify stacks using materials matching the type, thickness and diameter of existing as necessary to comply with this requirement.

### 3.7 FIELD QUALITY CONTROL

- A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.
  - 1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in.
  - 2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.
- B. Re-inspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for re-inspection.
- C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.
- D. Test storm drainage piping according to procedures of authorities having jurisdiction or, in absence of published procedures, as follows:
  - 1. Notify Owners Representative of testing schedule to enable witness of the test.
  - 2. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
  - 3. Coordinate test of roof drain assembly with the completion of roofing material installation to ensure watertight seal at drain clamping ring.
  - 4. Leave uncovered and unconcealed new, altered, extended, or replaced storm drainage piping until it has been tested and approved. Expose work that was covered or concealed before it was tested.
  - 5. Test Procedure: Test storm drainage piping on completion of roughing-in. Close openings in piping system and fill with water to point of overflow, but not less than required by the UPC. From 3 hours before inspection starts to completion of inspection, water level must not drop. Inspect joints for leaks.
  - 6. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
  - 7. Prepare reports for tests and required corrective action.

### 3.8 CLEANING

- A. Clean interior of piping. Remove dirt and debris as work progresses.
- B. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.
- C. Place plugs in ends of uncompleted piping at end of day and when work stops.

- D. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.

END OF SECTION

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Piping materials and installation instructions common to most piping systems.
  - 2. Mechanical demolition.
  - 3. Supports and anchorages.
- B. Related Sections include the following:
  - 1. Division 2 Section "Minor Demolition for Remodeling".
  - 2. Division 7 Section "Built-up Roofing".
  - 3. Division 22 Section "Rain Leader Piping".
  - 4. Division 22 Section "Pipe Insulation".

## PART 2 - PRODUCTS

### 2.1 PIPE, TUBE, AND FITTINGS

- A. Refer to individual piping Sections for pipe, tube, and fitting materials and joining methods.
- B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

### 2.2 JOINING MATERIALS

- A. Refer to individual piping Sections for special joining materials not listed below.

## PART 3 - EXECUTION

### 3.1 MECHANICAL DEMOLITION

- A. Refer to Division 2 Section "Minor Demolition for Remodeling" for general demolition requirements and procedures.

- B. Disconnect, demolish, and remove mechanical systems, equipment, and components indicated to be removed.
  - 1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
  - 2. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
  - 3. Equipment to Be Removed: Disconnect and cap services and remove equipment.
  - 4. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
  
- C. If pipe, insulation, or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

### 3.2 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. Install piping according to the following requirements and Division 22 Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.
- D. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- F. Install piping to permit valve servicing.
- G. Install piping at indicated slopes.
- H. Install piping free of sags and bends.
- I. Install fittings for changes in direction and branch connections.
- J. Install piping to allow application of insulation.
- K. Select system components with pressure rating equal to or greater than system operating pressure.

- L. Verify final equipment locations for roughing-in.
- M. Refer to equipment specifications in other Sections of these Specifications for roughing-in requirements.

### 3.3 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and Division 22 Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

### 3.4 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

- A. Install equipment to allow maximum possible headroom unless specific mounting heights are indicated.
- B. Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.
- C. Install equipment to allow right of way for piping installed at required slope.

### 3.5 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor mechanical materials and equipment.

END OF SECTION

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## PART 1 - GENERAL

### 1.1 DESCRIPTION AND RELATED WORK

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications Sections, apply to this Section.
- B. Related sections include Section 07 92 00 "Joint Sealants".

### 1.2 SCOPE

- A. Provide all labor, material and equipment required for complete, safe, workable electrical systems. Comply with the latest edition of the National Electrical Code and applicable local, state and national codes and standards.
- B. Re-work electrical system as required to facilitate work of other trades.
- C. Where the work of several crafts is involved, coordinate all related work to provide each system in complete and in proper operating order.
- D. Cooperate with all others involved in the project, with due regard to their work, to promote rapid completion of the entire project.
- E. Local Conditions: The Contractor shall thoroughly familiarize himself with the work as well as the local conditions under which the work is to be performed. Schedule work with regard to seasons, weather, climatic conditions, and all other local conditions, which may affect the progress and quality of the work.
- F. Demolition: Coordinate all related demolition in support of the project. Restore circuits and systems, which are to remain, but which are affected in any way by demolition Work. Refer to Part 3 of this Section for execution requirements.

### 1.3 CODES AND STANDARDS

- A. Codes: Perform all work in strict accordance with all applicable national, state and local codes; including, but not limited to the latest legally enacted editions of the following specifically noted requirements:
  - 1. NFPA 70, National Electrical Code – NEC.
  - 2. International Building Code – IBC.
  - 3. International Fire Code – IFC.
  - 4. Underwriters Laboratory (UL) or approved equal.
- B. Standards: Reference to the following standards infers that installation, equipment and material shall be within the limits for which it was designed, tested and approved, in conformance with the current publications and standards of the following organizations:
  - 1. American National Standards Institute – ANSI.

2. National Electrical Manufacturers' Association – NEMA.
3. National Fire Protection Association – NFPA.

#### 1.4 DEFINITIONS

- A. "Contracting Agency" is the Owner as defined in the General Conditions of the Contract.
- B. "Provide" means furnish all products, labor, subcontracts, and appurtenances required and install to a complete and properly operating, finished condition.
- C. "Furnish" means to purchase material as shown and specified, and cart the material to an approved location at the site or elsewhere as noted or agreed, to be installed by supporting crafts.
- D. "Install" means to set in place and connect, ready for use and in complete and properly operating finished condition, material that has been furnished.
- E. "Accessible" means arranged so that an appropriately dressed man, 6 feet-2 inches tall, weighing 250 pounds, may approach the area in question with the tools and products necessary for the work intended, and may then position himself to properly and safely perform the task to be accomplished, without disassembly or damage to the surrounding installation.
- F. "Serviceable" means arranged so that the component or product in question may be properly removed, and replaced without disassembly, destruction or damage to the surrounding installation.
- G. "Product" is a generic term, which includes materials, equipment, fixtures, and any physical item used on the project.
- H. "Basis of Design" refers to products around which the design was prepared. Some or all of the particular characteristics of Basis of Design products may be critical to the fit or performance of the completed installation. Such characteristics are often subtle. Where substitutions are made to products that are the Basis of Design, the Contractor is alerted that nominally acceptable substitutions may produce undesirable side effects such as switchboards that no longer fit the space due to increased product dimensions. The Contractor is responsible for resolving all impacts of substitutions. Approval of a substitution request does not relieve the Contractor of complying with the design intent and all Codes.
- I. "As Specified" denotes a product, system, or installation that:
  1. Includes all of the salient characteristics identified in the Drawings and Specifications;
  2. Meets all of the requirements of the "Basis of Design"; and
  3. Is produced by a manufacturer listed as acceptable on the Drawings or in the Specifications.
- J. "Substitution" is a product, system or installation that is not by a listed manufacturer or does not conform to all salient characteristics identified in the Contract



Documents, but which the Contractor warrants meets all specific requirements listed in the Contract Documents.

#### 1.5 PRODUCT AND SYSTEM SUBMITTALS

- A. Submittals: Provide submittals for all products and systems in Division 26 to demonstrate compliance with the requirements of the project. Unless specified otherwise in Division 1, submit data not later than 60 days after award of contract or, in any case, to allow sufficient time for review without delaying construction.
- B. Mark submittal literature and shop drawings clearly and bind 8-1/2 by 11 inch literature in three-ring hardback loose-leaf binders by individual sets.

#### 1.6 PERMITS, TESTS AND INSPECTIONS

- A. Schedule, obtain, and pay for all permits and fees required by local authorities and by these specifications.
- B. Request for Tests: Notify the Contracting Agency a minimum of 24 hours in advance of tests. In the event the Contracting Agency does not witness the test, certify in writing that all specified tests have been made in accordance with the specifications.
- C. Deficiencies: Immediately correct all deficiencies that are evidenced during the tests and repeat tests until system is approved. Do not cover or conceal electrical installations until satisfactory tests are made and approved.
- D. Operating Tests: Upon request from the Contracting Agency, place the entire electrical installation and/or any portion thereof, in operation to demonstrate satisfactory operation.

#### 1.7 IDENTIFICATION

- A. Junction Boxes: Mark the circuit numbers of wiring on all junction boxes with sheet steel covers. Mark with indelible black marker. On exposed junction boxes in finished areas mark on inside of cover.

#### 1.8 PROJECT COMPLETION AND DEMONSTRATION

- A. Tests: During final inspection, conduct operating tests for approval. Demonstrate installation to operate satisfactorily in accordance with requirements of Contract Documents. Should any portion of installation fail to meet requirements of Contract Documents, repair or replace items failing to meet requirements until items can be demonstrated to comply. Furnish personnel to assist in taking measurements and making tests. In the event that systems are not complete and fully operational at the time of final inspection, all costs of any subsequent inspections shall be borne by the Contractor at no additional cost to the Owner.

1.9 WARRANTY

- A. Warranty work shall be promptly coordinated and performed at the Contractor's sole expense. All workmanship, labor and materials (without limitation) in this Division shall be warranted for the longer of the following:
  - 1. As called for in the General Conditions of the Contract.
  - 2. For a minimum period of one year from the date of final acceptance.
- B. Where a specific product carries a longer warranty as a standard offering of its manufacturer, extended warranty coverage beyond these requirements shall be retained by the Owner. The Owner will have recourse back to the manufacturer only in these cases, when the warranty as specified in A above has expired.

1.10 SYSTEM DESCRIPTION

- A. Outdoor Locations, Above Grade: Provide Watertight cold temperature rated EMT conduit, watertight liquid tight flexible conduit as indicated. Provide cast metal pull and junction boxes. Provide an airtight seal around conductors for conduits where they terminate in boxes.
- B. Exposed Dry Locations: Provide rigid steel conduit, intermediate metal conduit, and electrical metallic tubing. Provide sheet-metal boxes. Provide hinged enclosure for large pull boxes. Provide an airtight seal around conductors for conduits where they terminate in boxes.

PART 2 - PRODUCTS

2.1 WIRING

- A. Wiring shall be copper, XHHW insulation minimum. Minimum wire size shall be #12 AWG. All conductors used on this project shall be copper, solid or stranded for wiring #10 or smaller, stranded for #8 or larger.
- B. Wiring shall be in metal raceways interior, and PVC raceways for exterior. Fittings shall be steel/malleable iron (Die cast not approved). Provide properly sized and bonded grounding conductors with power circuits.

2.2 METAL CONDUIT

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Intermediate Metal Conduit (IMC): Rigid steel.
- C. Fittings and Conduit Bodies: NEMA FB 1; all steel fittings with insulated throats or bushings. Rigid Metal or Intermediate Metal Conduit: Threaded hubs and connections with insulated throats only.
- D. Conduit Bodies: NEMA FB 1; Aluminum or steel.

2.3 FLEXIBLE METAL CONDUIT

- A. Product Description: Interlocked steel construction.
- B. Fittings: NEMA FB 1; steel fittings with insulated throats or bushings.

2.4 LIQUIDTIGHT FLEXIBLE METAL CONDUIT

- A. Product Description: Interlocked steel construction with PVC jacket.
- B. Fittings: NEMA FB 1, steel or malleable iron with insulated throat or bushings.

2.5 ELECTRICAL METALLIC TUBING (EMT)

- A. Product Description: ANSI C80.3; galvanized tubing.
- B. Fittings: NEMA FB 1; steel compression type with insulated throat or bushings.
- C. Conduit Bodies: NEMA FB 1; Aluminum or steel threaded type.

2.6 OUTLET BOXES

- A. Cast Boxes: NEMA FB 1, Type FD, cast aluminum, or iron (galvanized) boxes for exterior or wet locations. Furnish gasketed cover by box manufacturer. Furnish threaded hubs.
- B. Wall Plates for Unfinished Areas: Furnish gasketed cover.

2.7 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.
- B. Exterior Surface Mounted Cast Metal Box: NEMA 250, Type 4 flat-flanged, surface mounted junction box, galvanized cast iron. Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

2.8 CONDUIT SEALANTS

- A. For non-thermally differential sealing. Non-hardening, safe for contact with human skin, not deleterious to cable insulation, and workable at temperatures as low as 35 deg F. Capable of withstanding temperature of 300 deg F without slump and adhering to clean surfaces of plastic ducts, metallic conduits, conduit coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and common metals.
- B. For thermal sealing. Silicone or foam, safe for contact with human skin, not deleterious to cable insulation, which adheres to clean surfaces of plastic ducts, metallic conduits, conduit coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and common metals.

## PART 3 - EXECUTION

### 3.1 DEMOLITION

- A. Examination Prior to Start of Demolition: Conduct a thorough site inspection before disturbing existing installation. Verify field measurements and circuiting arrangements. Verify that abandoned wiring and equipment serve only abandoned facilities. Beginning of demolition certifies acceptance of existing conditions.
- B. Preparation:
1. Disconnect electrical systems in walls, floors, ceilings, roofs, etc., scheduled for removal.
  2. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits use personnel experienced in such operations.
- C. Demolition of Existing Electrical Work:
1. Remove, relocate, and extend existing installations to accommodate new construction.
  2. Remove abandoned wiring to source of supply.
  3. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut concealed conduit flush with walls and floors, and patch surfaces.
  4. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets, which are not removed. In finished areas, blank covers shall be blank plates matching the device plates specified for new work, unless otherwise noted or specified.
  5. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
  6. Repair adjacent construction and finishes damaged during demolition and extension work.
  7. Maintain access to existing electrical installations that remain active. Modify installation or provide access panels as appropriate.
  8. Restore circuits and systems to remain that are affected in any way by demolition Work, such as loads downstream of demolished equipment.
  9. Salvage or disposal of removed items shall be as noted on the Drawings or as directed by the Contracting Agency. Items, which the Owner does not desire to retain, shall be disposed of at a legal disposal site.
- D. Cleaning and Repair:
1. Clean and repair existing materials and equipment that remain or are to be reused or are affected by this work.

### 3.2 REPAIR OF EXISTING

- A. Repair all surfaces damaged or impacted by the work. Restore to original condition or better. Retexture surfaces to match surrounding surfaces. Repaint all affected

surfaces, with extent of paint to include adjacent surfaces to next wall or other clean break to avoid mismatched finish.

### 3.3 EXTENSION OR REROUTING OF EXISTING

- A. Verify existing operational status of equipment to remain. Document existing terminations and wire continuity for reconnections. Safely remove conductors to accessible point (pull box, junction box, cabinet, etc.) to remain. Provide new raceway (conduit, boxes, fittings, etc.) and extend wiring to existing device.
- B. Restore existing equipment to original operating status.
- C. Aim relocated directional light fixtures to illuminate original area to equal or better uniformity.

### 3.4 INSTALLATION

- A. Skilled craftsmen shall install all materials and equipment. The norms for execution of the work shall be in conformity with NEC Chapter 3 and the National Electrical Contractors' Association "National Electrical Installation Standards", which herewith is made part of these specifications.
- B. Employ workmen skilled in the trade and familiar with techniques required to complete the work in a neat and workmanlike manner. Workmanship is subject to approval by the Owner.
- C. Horizontal runs on roof surfaces: Intermediate metal conduit (IMC) or rigid metal conduit (RMC). Secure horizontal runs of 1/2 inch conduit at least every 8 feet.
- D. Wire Marker Installation:
  - 1. Install wire marker for each conductor at panelboard gutters, pull boxes, outlet and junction boxes, termination and each load connection.
  - 2. Identify each conductor with its circuit number or other designation indicated.
  - 3. When two or more neutrals are located in one conduit, individually identify each with proper circuit number.
  - 4. Label all conductors at the point of utilization with tags having clearly legible data identifying the panel and circuit number, or other appropriate identification.
  - 5. Conductors in a pull or junction box which contains only an individual branch circuit or a single multi-wire branch circuit whose conductors are terminated on a multi-pole breaker or contiguous breakers need not be tagged or labeled.
- E. Repair all surfaces and furnish all required material and labor to maintain fireproof, airtight and waterproof characteristics of the construction.

### 3.5 AIR, MOISTURE, AND WATER INFILTRATION

- A. Where raceways penetrate building envelopes, thermally seal the raceway inside of the building at a conduit body, pull-box or junction-box at the nearest feasible point

where joints in the raceway between the seal and the building penetration do not defeat the purpose of the seal.

- B. Where a raceway passes into or through an air intake duct, refrigerator, etc., install in such a manner to prevent the buildup of moisture or ice which would cause damage to the raceway or its contents similar to building envelope but on warm side of penetration.
- C. Design raceways penetrating building so water will not enter the building through the raceway or through the penetration in the building wall or foundation. Raceway entering a building below grade shall be designed so that water in raceway will not flow into electrical equipment.
- D. Design raceways to encourage the drainage of water from inside the raceway. Conduit penetrating into electrical equipment shall be sloped to not allow water to flow into the equipment.
- E. Use mechanical or foam sealant in raceways penetrating building below grade.
- F. Junction or pull boxes installed through vapor barrier of exterior walls shall be sealed against moisture and air transmittance with duct seal on exterior of box.

END OF SECTION