CITY OF HOMER
INVITATION TO BID / BID DOCUMENTS

City Hall Roof Replacement
Homer Alaska 2019

INVITATION TO BID
By the City of Homer, Alaska

City Hall Roof Replacement 2019

Sealed bids for the replacement of the City of Homer Alaska, City Hall Roof 2019 will be received at the Office of the City Clerk, City Hall, City of Homer, 491 East Pioneer Avenue, Homer, Alaska, until **2:00 p.m. Thursday, June 06, 2019** at which time they will be publicly opened and read. The time of receipt will be determined by the City Clerk's time stamp. Bids received after the time fixed for the receipt of the bids shall not be considered. All bidders must submit a City of Homer Plan Holders Registration form to be on the Plan Holders List and to be considered responsive. Plan holder registration forms and Plans and Specifications are available online at http://www.cityofhomer-ak.gov/rfps

A Pre-Bid site meet will be held at 1:00 PM, May 29, 2019 at City Hall. (491 East Pioneer Avenue) to answer bidder's questions. Ladder will be provided for roof access.

The work includes, but is not limited to the following:

Removal and replacement of approximately 5900 S.F. of roofing membrane, including roof drains and flashing, and installation of new plywood decking material. The project includes proper handling and disposal of asbestos material as called for within the plans and bid documents.

Please direct all technical questions regarding this project to: Dan Gardner, City of Homer, Public Works Department, 3575 Heath Street, Homer, Alaska 99603 (907) 235-3170

An electronic copy of Plans and Specifications is available on the City's website http://www.cityofhomer-ak.gov/rfps or you may purchase hard copies at the Office of the City Clerk upon payment of $170 per set ($200 for overnight delivery). City of Homer Standard Construction Specifications 2011 Edition (containing general contract provisions) may also be downloaded from the City's web site. All fees are non-refundable. The City of Homer reserves the right to accept or reject any or all bids, to waive irregularities or informalities in the bids, and to award the contract to the lowest responsive bidder.

DATED this 10th day of May 2019.

CITY OF HOMER

Katie Koester, City Manager

Publish: Homer News – May 16 and 23, 2019
Anchorage Daily News – May 19, 2019

Fiscal Note: 156-0384

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CITY HALL ROOF REPLACEMENT 2019

Bid advertisement for **City of Homer Alaska, City Hall Roof Replacement 2019**

INVITATION TO BID

City Hall Roof Replacement Homer Alaska 2019

The City of Homer, Alaska is requesting bid proposals from qualified firms and individuals for the project described herein.

I. Scope of Services

The proposed work is located within the Homer City limits and is illustrated on the plans entitled:

City Hall Roof Replacement Homer Alaska 2019

The project consists of furnishing all labor, materials, equipment, tools, supervision and other facilities necessary for the performance of the work described herein and shown on the project drawings. The work includes but is not limited to the following:

Removal and replacement of approximately 5900 S.F. of roofing membrane, including roof drains and flashing, and installation of new plywood decking material. New membrane is PVC. The project includes proper handling and disposal of asbestos material as called for within the plans and bid documents

II. General Bidding Requirements

The work must be performed by a Contractor skilled and regularly engaged in the general class or type of work called for under the Contract. The bidder must have a current contractor's license issued by the State of Alaska. The license must apply to the work described in the Invitation to Bid.

The City of Homer Standard Construction Specifications, 2011 Edition, shall supplement the project plans. A copy of the Homer Standard Construction Specifications (S.C.S.) may be obtained at the City of Homer Web Site, http://www.cityofhomer-ak.gov/publicworks

State Prevailing Rate Wages

See appendix for specific Davis Bacon Requirements.
This project is covered by the State of Alaska, Laborer's and Mechanic's Minimum Rates of Pay, **Title 36 Public Contracts, (AS 36.05 & 36.10) Pamphlet No. 600, Issue 37 and General Decision Number: AK190001 01/18/2019 AK1.** It is the responsibility of the bidder to determine the current rates of pay required and to submit the proper certified payrolls to the State Department of Labor.

Performance and Payment bonds in the amount of One Hundred Percent **100%** of the bid amount are required.

Bids must be submitted on the Bid Form and be received at the Office of the City Clerk, 491 E. Pioneer Avenue, Homer, Alaska 99603. **A bid bond is required.** Cashier checks in an amount equal to five percent (5%) of the bid are acceptable. Surety bonds are acceptable.

The City of Homer has a two-part bid process, Part A and Part B. Each portion of the bid must be submitted in separate envelopes. At the bid opening, Part B is opened first and must be complete and regular or Part A will not be opened and the bid will be rejected.

Part A of the bid contains the
Bid Form **(Part A)**
Bid Bond **(Part A)** and the Power of Attorney (if needed).
Part A must be submitted separately in an envelope marked Part A.

Part B of the bid contains:
Addenda Acknowledgement must be signed and included with the Bid. **(Part B)**
EEO-1 Certification **(Part B)**
Equal Employment Opportunity Clause form. **(Part B)**
(Part B must be submitted separately in an envelope marked Part B).

III. Instruction to Bidders

The City of Homer reserves the right to accept or reject any or all proposals, to waive irregularities or informalities in the proposals, and to award the contract to the bidder that best meets the criteria stated below.

A. Qualification of Bidders

It is the intention of the City of Homer to award this contract to the lowest responsible, responsive Bidder who furnishes satisfactory evidence they have the requisite experience, ability and sufficient capital, facilities and plant to prosecute the work successfully (and properly) and to complete it within the time allowed in the Contract at the least cost to the City of Homer for dollars spent for value received.

If the signature on the Bid is by an agent, other than an Officer of a corporation of a member of a Co-partnership, a Power of Attorney must either be on file with the City Clerk prior to the Bid opening or submitted with the Bid in Part B.

B. Taxes

Attention is directed to the requirements of the General Conditions regarding the payment of taxes. All taxes that are lawfully assessed against Owner or Contractor in connection with the work shall be paid by the Contractor. The Bid prices shall include all such taxes.

The City of Homer is exempt from local sales taxes. The Contractor shall not include sales tax markup in his bid. However, in order to recoup sales tax the Contractor might pay at local vendors, the Contractor must secure a Tax Exempt card from the Kenai Peninsula Borough Tax Department.

C. Familiarization with the Work

Before submitting a Bid, each prospective Bidder shall familiarize themselves with the work, labor conditions and all laws, regulations and other factors affecting performance of the work. The Contractor shall carefully correlate his observations with the requirements of the Contract Documents and otherwise satisfy himself of the expense and difficulties attending performance of the work. The submission of a Bid shall constitute an acknowledgement that the Bidder has thoroughly examined and is familiar with the Contract Documents and the provisions thereof. The failure or neglect of a Bidder to receive or examine any of the Bid Documents shall in no way relieve the bidder from any obligations with the respect to their Bid or to the Contract. Misinterpretation or a reputed lack of knowledge concerning the Bid will not serve as a basis for a claim for additional compensation.

1. Site Conditions

Each Bidder shall visit the site of the Work and completely inform himself relative to construction hazards and procedures, the availability of lands, the character and quantity of surface and subsurface materials and utilities to be encountered, the arrangement and conditions of existing structures and facilities, the procedure necessary for maintenance of uninterrupted operations of existing facilities, the character of construction equipment and facilities needed for performance of the work, and facilities for transportation, handling and storage of materials and equipment. All such factors shall be properly investigated and considered in the preparation of the Bid.

D. Interpretation of Bid Documents

All questions about the meaning or intent of the Contract Documents shall be submitted, in writing, to the Office of the Director of Public Works, 3575 Heath St. Homer Alaska, 99603. Replies will be issued by Addenda mailed or delivered to all parties recorded by the City Clerk's Office as having received the Bidding documents. **The City of Homer will not be held responsible for questions received less than (7) days prior to the date of opening of Bids.** Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. No questions will be answered the day of the bid due date.

The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Addendum Form, properly signed by the Bidder and placed in envelope B. It shall be the Bidder's responsibility to inquire as to addenda issued. **Failure to include the Addenda Form in envelope B shall result in the Bid being rejected as non-responsive.**

E. Bid Bond Guarantee

Each Bid shall be accompanied by a Bid Bond duly completed on the suggested form provided by a guaranty company authorized to carry on business in the State of Alaska, along with a General Power of Attorney form, if applicable, for payment to the City in the sum of five percent (5%) of the total amount of the Bid. **Failure to include the Bid Bond in envelope A of the Bid shall result in the Bid being rejected as non-responsive.**

The amount payable to the City under the Bid Bond or the certified or cashier's check, as the case may be, shall be forfeited to the City in case of a failure or neglect of the Bidder to furnish, execute, and deliver to the City required Performance and Payment Bonds, Evidences of Insurance, necessary forms or material required by the Bid or failure to enter into, execute and deliver to the City the Contract on the form provided therefor, within ten (10) working days after receipt of "Notice of Intent to Award Contract" by the City that the Contract is ready for execution. The "Award of Contract" will be made upon the execution of the Contract by the Bidder and the City.

F. Return of Bid Guarantee

Within thirty (30) days after the Bids are opened, the City will return the Bid Guarantees accompanying the Bids, which are not to be considered in making the award. The bid Guarantees of the three (3) lowest responsive Bids will be held until the Contract has been fully executed after which time the Guarantees will be returned to the respective Bidders whose Bids the Guarantees accompanied.

G. Contract Time

The Contract Time is an essential part of the Contract and it will be necessary for each Bidder to satisfy the City of his ability to complete the work within the time set forth in the Bid form. Provisions for delays, liquidated damages, and extensions of time are set forth in the Standard Construction Specifications. Time is of the essence in this contract.

H. Bids

1. Preparation of Bids

Bids must be submitted on the forms provided by the city and completed in all respects as required by the Bid Documents. Bids shall include all information requested herein, and be manually signed by the Bidder or the Bidder's duly authorized representative, with the Bidder's address and phone number.

If the signature is by an agent, other than an Officer of a Corporation, or a member of a Co-partnership, a Power of Attorney must be on file with the City Clerk prior to opening the Bid or submitted in envelope B of the Bid; otherwise, the Bid will be disregarded as irregular and unauthorized, and will be rejected as non-responsive.

All Bids must be regular in every respect, and no alterations shall be made to the Bid form. If erasures or changes appear on the forms, each must be initialed by the person signing the Bid. No oral, telegraphic or telephone proposals will be considered.

Bids will be received at the City Clerk's Office located at 491 East Pioneer Avenue, Homer, Alaska 99603, until the time indicated on the Invitation to Bid. Each Bid shall be submitted enclosed in a sealed, opaque envelope. **The Bidder shall see that the Bid title and date of Bid opening is on the lower left-hand corner of the envelope.** The City is not responsible for the premature opening of, or failure to open, a bid not properly addressed and identified. Promised overnight delivery from the Post office or private carriers usually is an inaccurate statement for Alaska and Homer Area.

No consideration will be given by the city to a claim of error unless such claim is made to the city in writing within two (2) hours after the time of Bid opening. Written verification and supporting evidence of the error shall be delivered to the City Clerk within 24 hours of the Bid Opening (not including Saturday, Sunday or legal holidays) to allow consideration of the claim for error. Supporting evidence shall be original documents, including cost breakdown sheets, supplier quotes and other documents used to compute the Bid.

It is the bidder's responsibility to see that Bids are deposited at the time and place set forth for the public opening of Bids. Bids not received by the time will not be accepted and will be returned to the Bidder in the sealed bid envelope.

II. The City of Homer Local Bidder Preference does not apply to this contract.

BIDDER'S CHECKLIST
Homer City Hall Roof Replacement

The following items must be completed and accompany the Bid unless noted otherwise (Note: This checklist consists of one (1) page):

Part A

1. BID FORM (Schedule), must be complete. The Bid form must be signed with the name and address of bidder typed or clearly printed, and a copy of the bidder's Alaska State Contract License must be included. **(Part A)**

2. BID BOND, Cashier's Check, Certified Check, or Cash in the amount of Five percent (5%) of the MAXIMUM BID must be included. **(Part A)**

Part B

3. Addenda Acknowledgement must be signed and included with the Bid. **(Part B)**

4. EEO-1 Certification **(Part B)**

5. Equal Employment Opportunity Clause form. **(Part B)**

All Bids must contain the items listed above in complete form and must be filled out and signed.

END OF SECTION

IV. BID SCHEDULE

Part A

PRICE PROPOSAL (BASE BID, ALTERNATE ITEMS 1 and 2, and UNIT PRICES)

BID FORM FOR CITY OF HOMER, CITY HALL, RE-ROOFING PROJECT

TO: City of Homer

FROM: _____
Company Name

_____
Company Contact

_____
Address

_____
Telephone Fax Cell

_____
Email Address

OFFEROR'S DECLARATION & UNDERSTANDING

The undersigned, hereinafter called the Offeror, declares that he has carefully examined the Request for Proposal including all attachments, the For Construction Drawings and Specifications, and all addenda (hereinafter called "Contract Documents") for the construction of the Project, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of Work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the Work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Bid is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Bid.

The Offeror further declares that the only person or parties interested in the Bid are those named herein, that this Bid is, in all respects, fair and without fraud, that it is made without collusion with any official of the City of Homer, and that the Bid is made without any connection or collusion with any person submitting another Bid on this Contract.

The Offeror agrees not to withdraw his bid within forty-five (45) days after the actual date of the bid opening.

DOCUMENTS TO SUBMIT WITH THIS BID

1. Bid Form (Base Bid and Alternate Items 1 and 2)
2. Addendum Acknowledgment on Bid Form
3. Bid Bond (5% of Bid, if bid exceeds $100,000) and Power of Attorney
5. Alaska Business License Number
6. Alaska Contractor's License Number

DOCUMENTS THE OWNER IS TO RECEIVE WITHIN 10 DAYS AFTER NOTICE OF AWARD

The Offeror understands that this Bid is one part of a selection process that involves other contractor selection criteria and that the Contract may not be awarded to the Offeror submitting the lowest bid. The Offeror agrees to participate in the balance of the selection process as indicated in the Instructions to Offerors. The Offeror further agrees that, if selected, he will deliver to the City of Homer, within 10 calendar days of Notice of Intent to Award, the following:

1. Performance Bond (100% of Contract)
2. Labor and Material Payment Bond (100% of Contract)
3. Necessary Power-of-Attorney
4. The Contractor's Certificate of Insurance
5. Corporate Acknowledgment (if applicable)
6. Contract (executed by Contractor)
7. Construction Schedule
9. List of subcontractors
10. Federally required certification re. debarment and suspension.

CONTRACT TIME OF COMPLETION AND LIQUIDATED DAMAGES

Offeror agrees to commence work not later than June 20, 2019 and to accomplish Substantial Completion by September 15, 2019.

ADDENDA

The Offeror has completed the Addenda Acknowledgment portion of this form.

BID TABULATION AND SUMMARY

Offeror agrees to perform all of the Base Bid construction Work described in the Documents, which include the For Construction Drawings and Technical Specifications, Special Conditions for the prices stated in the attached Bid Tabulation.

Prices are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern. Offeror understands that the Owner reserves the right to reject any or all bids and to waive irregularities in the bidding.

BID GUARANTEE: The Undersigned further agrees that the check or bid bond accompanying the bid is left in escrow with the Owner, that the amount of the check or bond is the measure of damages which the Owner will sustain by failure of the Undersigned to deliver said documents within 10 days after written notice of the award of contract to him or her, and that check shall become the property of the Owner, or the bid bond shall remain in full effect, should he or she so fail. But if a Notice of Intent to Award is issued within 45 days of the date set for the opening thereof, or if a Notice of Intent to Award is issued and the Undersigned delivers said agreement, and performance, and labor, and material payment bonds as required, the check shall be returned to him or her and the bid bond shall become void.

EXECUTION OF BID

Offeror shall execute and submit all pages of the Bid Form (Base Bid and Alternate Items 1and 2).

BASE BID, ALTERNATE ITEMS 1 and 2, and UNIT PRICES

I have received the documents titled: **Request for Proposal for the City of Homer Re-Roofing Project.**

I have received Addenda No(s). _____ and have included their provisions in my proposal.

I have examined both the documents and the site, and submit the following Price Proposal:

1. To hold my bid open forty-five (45) consecutive calendar days.
2. To accept the provisions of the Instructions to Offerors.
3. To enter into negotiations and execute a contract, if awarded, on the basis this Price Proposal and other items to be negotiated.
4. To furnish all labor and materials and to accomplish the work in accordance with the For Construction Drawing and other Contract Documents.
5. To accomplish Substantial Completion by September 15, 2019.

6. **Base Bid:** (All Work as required in the Base Bid):

$ _____

$
Dollars
_____
(Amount Written in Words)

7. **Additive Alternate Item 1:** (All Work as required for Alternate Item 1):

$ _____

$
Dollars
_____
(Amount Written in Words)

8. **Additive Alternate Item 2:** (All Work as required for Alternate Item 2):

$ _____

$
Dollars
_____
(Amount Written in Words)

12. **Base Bid plus Alternate Items 1 and 2. (<u>This is the Bid Amount that will be used to award the project</u>)**:

$ _____

$
Dollars
_____
(Amount Written in Words)

13. **Unit Prices:** (Unit prices shall be used to determine Change Order Amounts for currently unknown quantities of materials, labor, profit and overhead required to remove and replace materials found to be deteriorated when uncovered by the Work required in Division 07 Section Preparation for Re-roofing. Provide Unit Prices for the following and per the Work identified in Division 01 Section "Unit Prices." Unit prices shall not be used to determine low bidder. Unit Prices that appear excessive will be addressed during Contract Negotiation Phase. Failure to provide Unit Prices shall make this bid non-responsive.

Unit Price No. 1 (fiberglass batt insulation): $_____ per cubic foot
Unit Price No. 2 (Rigid Insulation, 5" thick): $_____per square foot
Unit Price No. 3 (5/8" Plywood Roof Sheathing) $_____per square foot
Unit Price No. 4 (Glass Mat Gypsum Sheathing Cover Board): $_____per square foot

The project will be awarded to the successful low bidder for the sum total of the Base Bid plus Alternate Items 1 and 2. The Contract shall be written for the Base Bid Amount only. Additive Alternates will be incorporated only if and as needed. Unit prices will be used only if and as needed.

A Contract shall not be formed and no rights shall exist under the Contract until the final contract is fully executed by all parties. Offeror agrees to commence work immediately upon full execution of the Contract or such later time where work is to commence upon a Notice to Proceed, adhere to the proposed schedule, and to assist the Owner in securing the expeditious execution of work.

If awarded a Contract, Contractor agrees to execute and perform the Contract in accordance with the Request for Qualifications and Proposals and as agreed in subsequent negotiations.

By executing this bid I certify that I have authority to bind the contractor or contracting firm or other business entity submitting this bid.

_____ _____
Contractor Date

_____ _____
Signature Title

_____ _____
Email address Fax

Current Information Required for Bid:

Alaska Business License # _____

Alaska Contractor's License # _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that _____

_____

Hereinafter called the PRINCIPAL, and _____

a Corporation duly organized under the laws of the State of Alaska having its principal place of business at _____
In the State of Alaska, and authorized to do business in the State of Alaska, as SURETY, are held and firmly bound unto the City of Homer hereinafter called the OBLIGEE, in the penal

sum of _____ DOLLARS ($_____) for payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT:

WHEREAS, the PRINCIPAL has herewith submitted his or its BID for _____

_____ said Bid, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the Bid submitted by the PRINCIPAL is accepted and the Contract awarded to the PRINCIPAL, and if the PRINCIPAL shall execute the proposed Contract and shall furnish such Performance and Payment Bond as required by the Contract Documents within the time fixed by the documents, then this obligation shall be void: if the PRINCIPAL shall fail to execute the proposed Contract and furnish the Bond, the SURETY hereby agrees to pay the OBLIGEE the penal sum as liquidated damages:

Signed and sealed this _____Day of _____, 2019.

PRINCIPAL: _____

BY:

_____

SURETY:

_____

ATTORNEY-IN-FACT:

_____

Part B

ADDENDA ACKNOWLEDGMENT

Project Name: **City Hall Roof Replacement 2019**

I hereby acknowledge addenda numbers:

_____

_____

_____

_____

_____

_____

Name of Firm: _____

Signature of Bidder: _____

Date: _____

This Acknowledgement must be included with Part B of the Bid or the Bid will be considered non-responsive.

City of Homer

Equal Employment Opportunity (EEO – 1) CERTIFICATION

The following Certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)) and must be submitted by BIDDERS and proposed SUBCONTRACTORS in connections with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5 (generally only contracts or subcontracts of $10,000 or under are exempt.) Proposed PRIME CONTRACTORS and SUBCONTRACTORS who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports, should note the 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period as specified by the Federal Highway Administration; by the Director, Office of Federal Contract Compliance Programs, U.S. Department of Labor; or by the Equal Employment Opportunity Commission.

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations. The Employer Information Report EEO-1 (Standard Form 100) is not a voluntary survey. The filing of the report is in accordance with Standard Form 100 instructions and is required by Federal law. The applicable law is Section 709©, Title VII, Civil rights Act of 1964 and regulations issued by the Equal Opportunity Commission under that law are reprinted in Appendix (6). Under Section 710(b) of Title VII, the Commission may obtain an order from a United States District Court compelling a covered employer to file this report. Under Section 209 (a) of Executive Order 11246, the penalties for failure by a Federal contractor or subcontractor to comply may include termination of the Federal government contract and debarment from future Federal contracts.

It is the employer's responsibility to keep current on all EEO-1 filing requirements. All inquiries and requests for special procedures should be directed to: Office of Federal Contract Compliance Programs, Department of Labor, Federal Building/U.S. Court House, 701 C Street, Box 55, Anchorage, AK 99513. Blank reporting forms may be obtained from: The Joint Reporting committee, P.O. Box 2236, Norfolk, Virginia 23501 (804) 625-3734.

(CHECK APPLICABLE BLOCK) The BIDDER _____ or proposed SUBCONTRACTOR _____ hereby certifies:

1. Their firm has participated in a previous contract or subcontractor subject to the Equal Opportunity Clause as required by Federal Executive Order 11246, Section 201 (301 F.R. 12319) YES_____ NO _____

   A. Their firm has filed all reports due under the applicable filing requirement with the Joint Reporting Committee Opportunity Commission as stated in this certifications. YES_____ NO _____

2. Their firm has participated in a previous City of Homer construction contract or subcontract. YES_____ NO _____

   A. Their firm has filed all the EEO reports due under applicable filing requirements of the city of Homer Department of Public Works. YES_____ NO _____

_____ _____
Signature of Authorized Representative of Company Date

_____ _____
Name of Company Phone Number

_____ _____
Address of Company Zip Code

PROJECT NAME
City of Homer Alaska, City Hall Roof Replacement 2019

This certificate (2 pages) needs to be included with the Bid Documents Part B or the Bid will be considered non-responsive.

EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

During the performance of this contract, the contractor agrees to comply with OFCC Regulations 40 CFR 60.1.4 (1) through (7) as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. 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, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer 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, sex, or national origin.

3. The contractor will send to each labor union or representative of workers with whom he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965 and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The contractor will comply with all provisions of executive order 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965 and by the rules, regulations, and orders of the secretary of labor, or pursuant thereto, and will permit access of his books, records, and accounts by the contracting agency and the secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any such rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in executive order 11246 of September 24, 1965 and such other sanctions may be imposed and remedies invoked as provided in executive order 11246 of September 24, 1965 or by rule, regulation or order of the Secretary of Labor 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 11246 of September 24, 1965 so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such

action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however that in the event the contractor becomes involved in, or is threatened wit, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interest of the United States.

_____ _____

(Signature) (Title)

_____

(Date)

This form (2 pages) must be included with the Bid, Part B, or the Bid will be considered non-responsive.

V. Contract Documents

C O N T R A C T

This Contract, made and entered into by and between the City of Homer, Alaska, a Municipal Corporation, hereinafter called the "City" and

_____

Hereinafter called the "Contractor";

WITNESSETH:

The Contractor, in consideration of the sum to be paid him by the City and of the covenants and agreements herein contained, hereby agrees at his own cost and expense to do all the work and furnish all the materials, tools, labor and all appliances, machinery and appurtenances for City to the extent of the Bid made by the contractor, dated the _____ day of _____, 2019, all in full compliance with the Contract documents referred to herein as:

City of Homer Alaska, City Hall Roof Replacement 2019

a) Invitation to Bid
b) The signed copy of the Bid
c) The Bid Bond
d) The 2011 Homer Standard Construction Specifications
e) All Addenda, totaling _____
f) The drawings which consist of 23 sheets entitled

Homer City Hall Re-Roofing Project

Are hereby referred to and reference made a part of the Contract as fully and completely as if the same were fully set forth herein.

In consideration of the performance of the work as set forth in these Contract Documents, the city agrees to pay to the contractor the amounts specified bid in the Bid and to make such payments upon the Contractor's invoicing as approved by the City Engineer.

C O N T R A C T

CONTRACT COMPLETION TIME

The Contractor agrees to complete the project, in all respects **September 15, 2019**

CONTRACT AMOUNT $_____
In Numbers

$_____
In Words

LIQUIDATED DAMAGES:

Liquidated damages in the amount of **$500.00** per day will apply to the Contractor's unexcused delay in the Completion of Construction. The liquidated damage amount specified herein shall only apply to damages and expenses the Owner may incur as a result of a delay in placing the facility into use and operation exclusive of third party damages or claims. The liquidated damage amount shall not cover any damages or expenses the Owner may incur as a result of the Contractor's unexcused delay in completing any portion of all of the Project, which delay results in whole or in part in delay, disruption, hindrance, interference, damages or expenses to any third party. The Contractor shall remain liable for the full amount of any such delay damages or expenses suffered by any third party without limitation by any liquidated damage provision set forth in the Contract.

IN WITNESS WHEREOF, we, the parties hereto, each herewith subscribe the same this _____ day of _____, 2019.

CITY OF HOMER

By: _____

Title: Mary K. Koester, Homer City Manager

CONTRACTOR

_____
(Contractor)

By: _____

Title: _____

PERFORMANCE BOND

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

_____ a _____
(Corporation, Partnership, Individual)

hereinafter called "Principal" and _____
(Surety)

of _____, State of _____

hereinafter called the "Surety" are held and firmly bound unto the City of Homer, 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 CONDITIONS OF THIS OBLIGATION are such that Whereas, the Principal has or is about to enter into a certain contract with the Owner, 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 it shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making food any default, then this obligations 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 the work to be performed thereunder or the specifications accompanying the same shall in any wise affect it obligation on this bond, and it does hereby waive notice of any such change, extension f time, alteration or addition to the terms of the contract or to the work or to the specifications.

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

IN WITNESS WHEREOF, this instrument is executed in five(5) counterparts, each one of which shall be deemed and original, this the _____ day of _____, 2019.

ATTEST:

(Principal's Corporate Secretary)	(Principal)
Affix CORPORATE SEAL if applicable	(Address-Zip Code)
(Witness as to Principal)	
(Address – Zip Code)	
	(Surety)
ATTEST:	By: (Attorney-in-Fact)
(Surety) Secretary	(Address-Zip Code)
(Affix SURETY'S SEAL)	
(Witness as to Surety)	
(Address-Zip Code)	

Notes:

If Principal is Partnership, all partners must execute bond. The Attorney-in-Fact, who executes this bond on behalf of the surety, must attach a copy of his Power-of-Attorney as evidence of his authority.

PAYMENT BOND

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

_____ a _____
(Corporation, Partnership, Individual)

hereinafter called "Principal" and _____
(Surety)

of _____, State of _____

hereinafter called the "Surety" are held and firmly bound unto the City of Homer,

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 CONDITIONS OF THIS OBLIGATIONS are such that Whereas, the Principal has or is about to enter into a certain contract with the Owner, 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 material for, or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for material, lubricants, fuels, 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 for 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 the work to be performed thereunder or the specifications accompanying the same shall in any wise affect it obligation on this bond, and it does hereby waive notice of any such change, extension f time, alteration or addition to the terms of the contract or to the work or to the specifications.

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

IN WITNESS WHEREOF, this instrument is executed in five (5) counterparts, each one of which shall be deemed and original, this the _____ day of _____, 2019.

ATTEST:

(Principal's Corporate Secretary)	(Principal)
Affix CORPORATE SEAL if applicable	(Address-Zip Code)
(Witness as to Principal)	
(Address-Zip Code)	
	(Surety)
ATTEST:	By: (Attorney-in-Fact)
(Surety) Secretary	(Address-Zip Code)

(Affix SURETY'S SEAL)

(Witness as to Surety)

(Address-Zip Code)

Notes:

If Principal is Partnership, all partners must execute bond. The Attorney-in-Fact, who executes this bond on behalf of the Surety, must attach a copy of his Power-of-Attorney as evidence of his authority.

CONTRACTOR'S REQUEST FOR PAYMENT

To Be Completed By Contractor	To Be Completed By Engineer If Adjustment Recommended
Owner: _____	
Contractor: _____ NO: _____ Period: _____	City of Homer PO# _____
Project: _____ Contract No.: _____ Page _____ of _____	Project # _____
Original Contract Amount $ -	$ _____
Amount Of Approved Change Orders $ - (add or subtract)	$ _____
Authorized Contract Amount $ -	$ _____
Bid Items Completed to Date $ -	$ _____
Change Orders Completed to Date $ -	$ _____
Materials on Hand $ -	$ _____
Total Amount Completed To Date $ _____	$ _____
Contract Retainage Amount _____ % $ - $ _____	$ _____
This Request _____ % $ - $ _____ (add or subtract)	$ _____ (add or subtract)
$ _____	$ _____
Total Amount Due to Date: $ -	$ -
Less Previous Payments: (subtract) $ -	(subtract) $ -
Amount Requested This Period $ -	$ -
We hereby represent that the above is a true estimate of work completed under the above contract to date and hereby release the Owner from any claims for materials or labor furnished ro expense included in requests for payment to date, except for integrated units of construction partially completed for which no request for payment has been made.	Quantities Verified: Date:
CONTRACTOR: _____ Date: _____	Resident Engineering Representative
By: _____ TITLE: _____	Request Verified: Date:
	Project Engineer
Payment Approved $ _____ ORD.(RES) NO. _____	RECOMMENDED FOR PAYMENT:
Owner's Official: _____ Date: _____	
Title: _____	Publlic Works Director

CONTRACTOR'S REQUEST FOR PAYMENT

OWNER: ______________________ **TO BE COMPLETED BY CONTRACTOR**

CONTRACTOR: ______________________ NO: ________ PERIOD: ______________

PROJECT: ______________________ CONTRACTOR NO: ________ PAGE ______ OF ______

TO BE COMPLETED BY ENGINEER

AMOUNTS RECOMMENDED

Bid Item No.	Description	Unit	Unit Price	Estimated Contract		Previously Approved		This Request		Total to Date		This Request		Total to Date	
				Quan.	Dollars	Quan.	Dollars	Quan.	Dollars	Quan.	Dollars	Quan.	Dollars	Quan.	Dollars

VI. Project Schedule

Homer City Hall Roof Replacement 2019

Advertise	Homer News Anchorage Daily News	5/16/19 & 5/23/19 5/19/19
Pre-Bid Site Meet – City Hall		1:00 PM, Wed, 5/29/19
Bids Due		2:00 PM, Thursday, 6/06/19
Notice of Intent to Award		6/07/19
Council Award		6/10/19
Notice to Proceed		No Later Than 6/20/19
Pre-Construction Meeting		To Be Determined
Construction Complete		9/15/19

VII. Technical Specifications

TECHNICAL SPECIFICATIONS
TABLE OF CONTENTS

END OF TABLE OF CONTENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

B. Related Requirements:
1. City of Homer Standard Construction Specifications 2011 Edition – General Provisions Article 4.4 “Changed Conditions” for procedures for submitting and handling Change Orders.
2. Division 01 Section “Alternates” for bid alternates that may be implemented should existing unsuitable condition be discovered requiring modification of entire roof areas.
3. Division 06 Section “Sheathing” for replacement plywood sheathing and replacement glass mat gypsum sheathing cover board.
4. Division 07 Section “Preparation for Re-roofing” for procedures related to potential use of unit prices.
5. Division 07 Section “Thermal Insulation” for replacement blown in fiberglass insulation and replacement extruded polystyrene rigid insulation.

1.3 DEFINITIONS

A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work **as** a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Amount by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes (if any), installation labor, overhead, and profit.

B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price No. 1: Removal of wet fiberglass batt insulation and replacement with new, dry, blown-in fiberglass insulation.
   1. Description: Remove and dispose off-site existing wet fiberglass batt insulation, and replace with new, dry, blown-in fiberglass insulation..
   2. Unit of Measurement: Cubic foot of blown-in fiberglass insulation.

B. Unit Price No. 2: Removal of wet or damaged rigid insulation and replacement with new, dry, extruded polystyrene 5-inches thick rigid insulation.
   1. Description: Remove and dispose off-site existing wet or damaged rigid insulation, and replace with new, dry, extruded polystyrene rigid insulation 5-inches thick.
   2. Unit of Measurement: Square foot of insulation removed and replaced.

C. Unit Price No. 3: Removal and replacement of deteriorated plywood roof sheathing roof deck.
   1. Remove and dispose off-site existing deteriorated plywood sheathing roof deck, and replace with new plywood sheathing roof deck, as specified in Division 06 Section “Sheathing.”
   2. Unit of Measurement: Square foot of roof sheathing removed and replaced

D. Unit Price No. 4: Removal of existing deteriorated cover board, and replacement with new glass mat gypsum sheathing cover board.
   1. Description: Remove and dispose off-site existing deteriorated cover board, and replace with new glass mat gypsum sheathing cover board.
   2. Unit of Measurement: Square feet of cover board removed and replaced.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 CONDITIONS FOR ACCEPTANCE

A. The condition of the existing sheathing and cover boards at all locations to be re-roofed is unknown. For relatively small areas, where unsuitable conditions of existing materials, as determined by Owner's Representative, are discovered during roof tear-off, conditions shall be remediated through the procedures specified in Division 01 Section "Unit Prices." For relatively large areas, where unsuitable conditions of existing materials, as determined by Owner's Representative, are discovered during roof tear-off, conditions shall be remedied through acceptance of Alternate(s) as specified in this Section.

1.3 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.4 DEFINITIONS

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

1.5 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
   1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

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

C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Add installation of cover board at full extent of Roof C.
   1. Base Bid: Includes tear-off and disposal of existing roof membrane and installation of new PVC roof membrane over existing expose substrate of Roof C.
   2. Alternate: Provide and install new glass mat gypsum cover board at Roof C and as specified in Division 06 Section “Sheathing,” including labor, materials, overhead and profit.

B. Alternate No. 2: Add installation of cover board at full extent of Roof D.
   1. Base Bid: Includes tear-off and disposal of existing membrane and installation of new PVC roof membrane over existing expose substrate of Roof D.
   2. Alternate: Provide and install new glass mat gypsum cover board at Roof D and as specified in Division 06 Section “Sheathing,” including labor, materials, overhead and profit.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
   1. Installation of the Work.
   2. Progress cleaning.
   3. Starting and adjusting.
   4. Protection of installed construction.

B. Related Requirements:
   1. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

1.3 QUALITY ASSURANCE

A. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of existing mechanical, electrical and communications equipment and systems and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of mechanical, electrical and communication systems, and other construction affecting the Work.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where

indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine parapets, exterior walls and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
1. Description of the Work.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Owner’s Project Representative according to requirements in Division 01 Section "Project Management and Coordination."

3.3 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed, if any. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
   1. Allow for building movement, including thermal expansion and contraction.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Repair or remove and replace damaged, defective, or nonconforming Work.
   1. Comply with Division 01 Section "Closeout Procedures" for repairing or removing and replacing defective Work.

3.4 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
   1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
   2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
   3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
      a. Use containers intended for holding waste materials of type to be stored.
   4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
   1. Remove liquid spills promptly.
   2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.5 STARTING AND ADJUSTING

A. Coordinate startup and adjusting of reinstalled mechanical equipment and operating components with requirements in Division 01Section "General Commissioning Requirements."

B. Start equipment and operating components to confirm proper operation. Report malfunctioning units, to Owner’s Project representative..

C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

D. Test each piece of equipment to verify proper operation.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.

C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes procedural requirements for cutting and patching.

B. See Divisions 02, 06 and 07 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

C. This Section includes cutting and patching existing siding as necessary for installation of roofing membrane and flashing. Patching of existing cover board(s) and plywood roof sheathing to remain that may be damaged during removal of existing membranes. Also included is other cutting that may be required for installation of roof membranes and flashing and patching of other material damaged in the process of completing the Work.

D. This Section includes cutting of existing roof membranes and flashing,

E. Owner Provided Work:
   1. The Contractor shall coordinate with the Owner which shall be responsible for the following Work to be provided by the Owner:
      a. Disconnection, removal and storage of existing electrical and communications equipment.
      b. Disconnection, removal and storage of refrigerant piping and refrigerant.
      c. Disconnection of existing HVAC ductwork as necessary and the removal and storage of existing relief air hood, rooftop unit, and exhaust fan.
      d. Reinstallation of existing electrical and communications equipment.
      e. Reinstallation existing HVAC ductwork as necessary and the removal and storage of existing relief air hood, rooftop unit, and exhaust fan including reconnecting and recharging refrigerant, and reconnecting and HVAC ductwork to provide fully installed properly operating equipment to match the original existing installation.

1.3 RELATED DOCUMENTS

A. See Division 02 Section “Selective Demolition” for:
   1. Demolition and removal of selected portions of building or structure.
   2. Salvage (removal and storage) of existing items to be reinstalled.

B. See Division 07 Section “Preparation for Re-roofing” for existing roof tear-off, for existing flashing and coping removal, and for patching related to preparation of existing substrates to receive new roofing assembly.

1.4 DEFINITIONS

A. Cutting: Removal or demolition of in-place construction necessary to permit installation or performance of subsequent work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.5 SUBMITTALS

A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
   1. Extent:
      a. Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
      b. Describe procedures necessary for the disconnection and removal of relief air hood, rooftop unit, and exhaust fan including electrical and mechanical work and procedures for reinstallation of the same units.
   2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
   3. Products: List products to be used and firms or entities that will perform the Work.
   4. Dates: Indicate when cutting and patching will be performed.
   5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
   6. Owner’s Project Representative's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.6 PREINSTALLATION MEETINGS

A. Cutting and Patching Conference: Conduct conference at Project site.
   1. Cutting and patching conference may be conducted concurrently and as part of preparation for re-roofing conference specified in Division 07 Section “Preparation for Re-roofing”
   2. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:

a. Contractor's superintendent.
b. Trade supervisor responsible for cutting operations.
c. Owner’s mechanical, and electrical, supervisors, relative to the disconnection, removal, storage, and reinstallation of mechanical, electrical and communications equipment.

3. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.7 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio. Obtain Owner’s Representative’s approval of the cutting and patching proposal before cutting and patching the following elements:
1. Bearing walls
2. Lintels
3. Structural decking
4. Miscellaneous structural metals
5. Equipment supports
6. Piping, ductwork, vessels, and equipment

B. Operational Elements: Unless specifically indicated otherwise, do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Obtain Owner’s Representative’s approval of the cutting and patching proposal before cutting and patching the following elements:
1. Primary operational systems and equipment.
2. Water, moisture, or vapor barriers
3. Fire protection systems
4. Noise and vibration control elements and systems
5. Control systems
6. Electrical wiring systems

C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching after application of final finish. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Owner’s Representative's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.
2. Re-use of existing materials for patching existing Work is prohibited unless specifically permitted in Division 02 Section “Selective Demolition” or elsewhere.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.
3. If existing materials are to be used for patching, inspect the materials to assure they are suitable. Reinstallation of broken or visually damaged materials is not permitted.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned coordinate with Owner which shall provide bypass to such services/systems before cutting to minimize interruption to occupied areas.

E. Avoid cutting existing pipe, conduit, or ductwork serving the building.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place construction by disconnecting, dismantling, sawing, drilling, breaking, chipping, grinding, and similar operations, using methods least likely to damage elements retained or adjoining construction.
   1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
   3. Mechanical and Electrical Services: Do not cut off pipe or conduit serving existing equipment to be removed, stored and reinstalled. Owner shall provide cutting, removal, storage, reinstallation and patching, including capping, valving, or plugging and sealing of remaining portion of pipe, conduit, or ductwork to prevent entrance of moisture or other foreign matter after cutting.
   4. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing (unless entire surface is indicated to be refinished elsewhere), closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
   1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
   2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
   3. Ceilings: Patch, repair, or re-hang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
   4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather-tight condition.
   5. Mechanical Equipment: Owner shall reconnect existing mechanical equipment to be reinstalled in accordance with the International Mechanical Code and the National Electrical Code, latest adopted editions by the authority having jurisdiction.

D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

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 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Demolition and removal of selected portions of building or structure.
2. Salvage (removal and storage) of existing items to be reinstalled.

B. Related Requirements:
1. Section 017300 "Execution" for general administrative and procedure requirements including installation of the work, progress cleaning, starting and adjusting, and protection of installed construction.
2. Section 017310 “Cutting and Patching” for cutting and patching Work.
3. Section 028223 “Asbestos Abatement” for procedure requirements related to selective demolition of existing asbestos containing roof membranes.
4. Section 070150.19 “Preparation for Re-roofing” for selective demolition requirements specifically related to the existing roof membranes, flashings, roof mounted equipment and roof drains.

1.3 DEFINITIONS

A. Demolish: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.

B. Remove: Detach items from existing construction, in a manner to prevent damage, store as necessary, prepare for reuse, and reinstall where indicated.

C. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.5 PREINSTALLATION MEETINGS

A. Pre-demolition Conference: See pre-preparation for re-roofing meetings in Division 07 Section “Preparation for Re-roofing.”

1.6 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control. Indicate proposed locations and construction of barriers.

B. Schedule of Selective Demolition Activities: Indicate the following:
   1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
   2. Interruption of utility services. Indicate how long utility services will be interrupted.
   3. Coordination for shutoff, capping, and continuation of utility services.
   4. Use of elevator, if any, and stairs.
   5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
   6. Schedule must indicate proposed schedule for Owner provided work including removal and reinstallation of mechanical, electrical, and communications equipment.

C. Pre-demolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations.

1.7 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged, if any.

1.8 FIELD 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. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Owner’s Representative of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: Roof Areas A, B, and E have been surveyed for asbestos and tested positive for asbestos. Elsewhere in the building there may also be hazardous materials present.
   1. Do not disturb hazardous materials or items suspected of containing hazardous materials except according to procedures specified elsewhere in the Contract Documents.
   2. Coordinate with hazardous material remediation subcontractor to prevent water from entering existing roofing system or building.

E. Storage or sale of demolished items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
   1. Maintain fire-protection facilities in service during selective demolition operations.

1.9 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

B. Coordinate with Owner’s removal and reinstallation of existing mechanical, electrical and communications equipment.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

C. Verify that all hazardous materials known to exist have been identified prior to selective demolition.

D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
   1. Inventory and record the condition of items to be removed and salvaged by Owner. Provide photographs or video of conditions that might be misconstrued as Contractor caused damage caused.
   2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, if any, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems to remain and protect them against damage.

3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
   2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
   3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.

B. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Proceed with selective demolition systematically, from higher to lower level.
   2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
   3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
   5. Maintain fire watch during and for at least 4 hours after flame-cutting operations.
   6. Maintain adequate ventilation when using cutting torches.
   7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
   8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
   9. Dispose of demolished items and materials promptly.

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Owner’s Representative, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Roofing: See Division 07 Section “Preparation for Re-roofing”.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site.
   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.

3.7 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.

3.8 SELECTIVE DEMOLITION SCHEDULE

A. Demolish:
   1. Roofing membranes and flashings see Section “Preparation for Re-roofing.”
   2. Roof drain domes/strainers and pans as indicated. Roof drain pipes to remain. Note: this does not include all roof drains and domes/strainers, only those indicated on the Drawings.

B. Owner Shall Remove and Reinstall: Existing roof-top unit, existing exhaust fan, existing relief air hood, existing lighting, electrical equipment and communication equipment.

C. Existing to Remain: Everything not indicated to be removed.

END OF SECTION

Part 1: General

1.01 SUMMARY OF WORK

A. Work for this project requires the disturbance or removal of asbestos containing material (ACM) and presumed asbestos containing material (PACM) as identified during the Hazardous Building Materials Survey performed by Satori Group, Inc. All activities that have the potential to disturb ACM must follow all applicable State, OSHA, and EPA regulations. The following ACM will be removed or disturbed during renovation activities for this project.

1. Silver lining top layer of roofing materials
2. Caulking on roof cap at roof B

B. The findings presented in the Hazardous Building Materials Surveys from Satori, identified in this document are intended as a baseline for bidding purposes. It is the contractor's responsibility to verify the report onsite and notify the owner of any discrepancies before starting work.

C. If any unexpected suspect material is found the contractor shall stop work immediately and not resume until the newly discovered material has been tested. All sampling and analysis associated with suspected asbestos materials will be the responsibility of the contractor. If analysis shows this material to be ACM it will be considered a change order and must be approved before being removed.

D. ACM and items contaminated from abatement activities become the responsibility of the contractor. Contractor is required to dispose of ACM waste according to 40 CFR 61 at an approved landfill.

E. Where other work is ongoing, or access is needed, the contractor is responsible to coordinate with the appropriate personnel to prevent exposure to non-abatement personnel. It is the responsibility of the contractor to secure the work area at end of shift times or any other times when work is not ongoing.

1.02 RELATED SECTIONS

A. Limited Hazardous Building Material Survey

1.03 DEFINITIONS AND ABBREVIATIONS

A. ACM Removal: Means any activity involving the demolition, removal, enclosure, renovation or encapsulation of friable and non-friable asbestos containing material.

B. Air Monitoring: The process of taking air samples to monitor the number of airborne asbestos fibers in an area or on workers to document exposure for OSHA regulations.

C. Amended Water: Water containing a wetting agent or surfactant with a surface tension of at least 29 dynes per square centimeter.

D. Asbestos: Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered. In addition, presumed asbestos containing material (PACM) is also treated as asbestos.

E. Asbestos Containing Material (ACM): Any material containing more than one percent asbestos.

F. Asbestos Containing Material Waste: Any material contaminated with an asbestos containing material which is to be removed from a work area for disposal.

G. Authorized Person: Any person authorized by the Contractor and required by work duties to be present in the regulated areas.

H. Barrier: Any surface that seals off the work area to inhibit the movement of fibers.

I. Building Inspector: Individual who inspects buildings for asbestos and has EPA Model Accreditation Plan (MAP) "Building Inspector" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.

J. Class I Asbestos Work: Activities defined by OSHA involving the removal of thermal system insulation (TSI) and surfacing ACM.

K. Class II Asbestos Work: Activities defined by OSHA involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic.

L. Class III Asbestos Work: Activities defined by OSHA that involve repair and maintenance operations where ACM, including TSI and surfacing ACM, is likely to be disturbed. Operations may include drilling, abrading, cutting a hole, cable pulling, crawling through tunnels or attics and spaces above the ceiling, where asbestos is actively disturbed or asbestos containing debris is actively disturbed.

M. Clean Room: An uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

N. Competent Person: A supervisor currently certified as an asbestos worker by the State of Alaska who is capable of identifying existing asbestos, tremolite, anthophyllite, or

actinolite hazards contained in building materials in the workplace or job site and has the authority to take corrective measures to eliminate them, as specified in CFR 1926.32 (f) and the specifications.

O. Containment Area: An area where asbestos removal operations are performed which is isolated by physical boundaries to completely prevent the spread of asbestos dust, fibers or debris.

P. Critical Barrier: Layers of flame resistant polyethylene sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

Q. Demarcation: signs complying with 29 CFR 1926.1101(k)(7) serve to demarcate the regulated area.

R. Disposal Bag: A 6 mil thick, leak-tight plastic bag, pre-labeled in accordance with 29 CFR 1926.1101, used for transporting asbestos waste from containment to disposal site

S. Disturbance: Activities that disrupt the matrix of ACM, crumble or pulverize ACM, or generate visible debris from ACM. Disturbance includes, but is not limited to, cutting away small amounts of ACM, no greater than the amount which can be contained in one standard sized glovebag or waste bag, not larger than 60 inches in length and width, in order to access a building component.

T. Excursion Limit (EL): An airborne concentration of asbestos in excess of 1.0 f/cc as measured over a thirty-minute time period. Contractor shall ensure that no employee is exposed to a level higher than this limit.

U. Fibers: A particulate form of asbestos 5 micrometers or longer with a length-to diameter ratio of at least 3 to 1.

V. Friable Asbestos Material: Material that contains more than one percent asbestos by weight and which can be crumbled, pulverized or caused to release fibers by hand pressure when dry. Nonfriable material which becomes friable during ACM removal shall be considered and handled as friable.

W. Glovebag: Not more than a 60 by 60 inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

X. Ground Fault Circuit Interrupter: A device which automatically de-energizes any voltage system component which has developed a fault in the ground line.

Y. HEPA Filter: High Efficiency Particulate Air filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles 0.3 micrometers in diameter. Each filter shall bear the following: UL Label 586, manufacturer's name, serial number, air flow rating, efficiency resistance and direction of air flow.

Z. Intact: ACM which has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix. Removal of "intact" asphaltic,

resinous, cementitious products does not render the ACM non-intact simply by being separated into smaller pieces.

AA. Negative Exposure Assessment: A demonstration by the Contractor that employee exposure during an operation is or will be consistently below the PELs.

BB. Non-friable Asbestos Material: Material that contains asbestos in which the asbestos fibers have been locked in by a bonding agent, coating, binder or other material so that the asbestos is well bound and will not release fibers during any appropriate use, handling, storage, transportation or processing. Nonfriable material that may become friable during demolition operations shall be considered friable.

CC. Permissible Exposure Limit (PEL): Airborne concentrations of asbestos greater than 0.1 f/cc as measured over an eight hour time period. Contractor must ensure that no employee is exposed to a level higher than this limit.

DD. Presumed Asbestos Containing Material (PACM): A suspect material that has not been sampled and tested to determine asbestos content.

EE. Regulated Area: An area established by the Contractor to demarcate areas where Class I, II and III asbestos work is conducted, any adjoining area where debris and waste from such asbestos work accumulates, and a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility that they may exceed, the permissible exposure limit.

FF. Removal: All operations where ACM and/or PACM is taken out or stripped from structures or substrates, and includes demolition operations.

GG. Respiratory Protection Program (RPP): A plan that outlines company procedures for choosing and using respirators in the workplace. This plan must be updated on a regular basis and have one person assigned to be in charge of it.

HH. Site Safety Health Plan (SSHP): A plan that details hazards that will or may be encountered onsite and addresses how the employee will be protected from these hazards.

II. Transport: All activities from receipt of the containerized asbestos waste at the generation site until it has been properly unloaded at the disposal site.

JJ. Time Weighted Average (TWA): The sum of the fiber concentrations in f/cc multiplied by the sample durations in minutes divided by the sum of the sample durations in minutes.

KK. Work Area: The area where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. A Work Area is a Regulated Area as defined by 29 CFR 1926.1101.

1.04 REFERENCES

A. Title 29 Codes of Federal Regulations (CFR), Department of Labor (USDOL)

a. Part 1910 General Occupational Safety and Health Standards
b. Part 1926 Safety and Health Regulations for Construction

B. Title 40 CFR, Environmental Protection Agency (EPA)

a. Part 61 National Emission Standards for Hazardous Air Pollutants
b. Part 311 Worker Protection
c. Part 763 Asbestos

C. Title 49 CFR, Department of Transportation (DOT)

a. Part 171 General Information, Regulations and Definitions
b. Part 172 Hazardous Materials Communication and Regulations
c. Part 173 General Requirements for Shipments and Packaging
d. Part 177 Carriage by Public Highway
e. Part 178 Specifications for Packaging
f. Part 382 Requirements for Drug Testing
g. Part 383 Commercial Driver's License Standards

D. State of Alaska Administrative Codes (AAC)

a. 8 AAC 61 Occupational Safety and Health Standards
b. 18 AAC 60 Solid Waste Management

E. Federal Standards

a. 313D Safety Data Sheets

F. American National Standard Institute (ANSI)

a. Z9.2 Local Exhaust Systems
b. Z87.1 Eye and Face Protection
c. Z88.2 Practices for Respiratory Protection

G. American Society for Testing and Materials (ASTM)

a. D-4397 Polyethylene Sheeting

H. National Institute of Occupational Safety and Health (NIOSH)

a. Manual of Analytical Methods, Current Edition

1.05 SUBMITTALS

A. Pre-work submittals must be submitted and approved, as needed, before work may start. If any changes or updates are made to these documents after work begins, notification of the change must be submitted and approved before implementing the change. Items to be submitted are listed here.

a. Work plan
b. All applicable EPA and AKDOL notifications
c. Schedule of completion
d. Competent person's name and qualifications
e. All worker certifications and medical approvals
f. Contractor's insurance
g. Site safety health plan and respiratory protection plan

1. Work plan shall encompass all stages of work. It must outline the removal procedures and demonstrate that they comply with 40 CFR and 29 CFR regulatory requirements. The work plan will detail out how the contractor will set up each area, ensure worker protection, removal procedures, initial exposure assessments, and air monitoring procedures. Contractor must detail how air monitoring will comply with standards outlined in 29 CFR 1926.1101. Contractor will submit disposal authorization at an EPA permitted landfill.

2. Contractor is required to use an independent laboratory for all monitoring and testing required by this project. The contractor must submit all certifications for industrial hygienist technicians and the laboratory itself. The necessary certifications are listed below.

i. For bulk samples, the laboratory must be accredited by the National Institute for Science and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP).

ii. For air monitoring, the industrial hygienist must participate in either the Asbestos Analysts Registry (AAR) or Proficiency in Analytical Testing (PAT) program for laboratories. Documentation must be provided in the submittal.

3. Contractor must submit, where applicable, all notifications to EPA and AKDOL. This includes, but is not limited to, EPA's NESHAP notification and asbestos abatement notification to the AKDOL.

4. Submit a copy of the current Project Designer certification for the Work Plan author.

5. Contractor is required to submit a schedule of completion for abatement work that includes specific start and stop dates.

6. A competent person must be identified by the contractor and is required to be onsite when work is being done. The name, current certification, and a complete listing of qualifications showing competence must be submitted to be approved by the owner.

The competent person will be responsible for ensuring that work is performed in accordance with the approved work plan and compliant with EPA and OSHA regulations.

7. Each worker is required to have a current State of Alaska Certificate of Fitness card and medical approval. Contractor must submit current certifications for all workers entering the containment.

8. Contractor must submit proof of insurance showing coverage to the monetary level of the contract amount.

9. Contractor must submit the most updated version of their site safety health plan and respiratory protection plan. These plans must be updated regularly and include all aspects found in 29 CFR 1910.1200, and 29 CFR 1910.134. The program administers name and contact information must be listed in each plan.

B. Post-work submittals will be submitted as one whole closeout package within two (2) weeks of completion of the project. This packet must be signed and dated by the contractor. The packet must include, but is not limited to, the following:

a. Documentation showing removal complying with 40 CFR and 29 CFR.

b. Start and finish dates.

c. Legible Daily Reports that include any changes to scope of work or work procedures and regulated sign in sheets. Safety meeting documentation must be included.

d. Daily air monitoring reports that are signed and dated including field data sheets, sample location figures, and air monitoring logs.

e. Final visual inspection sheet.

f. Manometer print-out readings to show Negative Pressure Enclosure for Class I removal.

g. Receipts for all disposals from the permitted landfill.

1.06 ON-SITE DOCUMENTATION

A. Contractor must have a copy of the respiratory protection plan and site safety health plan onsite at all times. These materials shall be easily accessible to all workers and inspectors.

B. The AKDOL notice listing the project location, dates, and worker certification and expiration date must be onsite.

C. USEPA NESHAP notice listing the project location, dates for work, quantities of materials to be removed, and disposal information.

D. The regulated area sign in sheet must be present near the entry to the regulated area.

E. Safety Data Sheets for any chemical to be used or encountered on the jobsite must be present and easily accessible.

Part 2: Products

2.01 PERSONAL PROTECTIVE EQUIPMENT

A. It is the contractor's responsibility to protect workers from all known hazards. Hazards include, but are not limited to, ACM, lead, electric shock, heat stress, slips, and trips. To address potential hazards, the competent person shall conduct a hazard assessment before work starts each day and conduct a safety meeting. This meeting shall identify all worksite hazards and address the proper protective measures.

B. Respiratory protection must be provided to the workers when required. Determination of respirator requirement, type of respirator, and requirements for wearing a respirator must be included in the contractor's respiratory protection plan. Respirator use must comply with 29 CFR 1910.134.

C. When required to be worn the contractor must provide workers, at no cost, with a respirator that will sufficiently protect them. Any respirator used must be approved by NIOSH. Disposable and paper dust masks are not acceptable to be used during asbestos abatement as stated in 29 CFR 1926.1101. If an employee requests to use a powered air purifying respirator (PAPR) the contractor is obligated to supply one to the worker.

D. Before respirators may be worn the worker must have undergone a fit test, training and medical examination. Medical examinations must be performed by a licensed health care physician once a year to meet 29 CFR 1910.134.

E. Respirators must be fitted with cartridges that address all hazards onsite. High efficiency particulate filter (HEPA) cartridges approved by NIOSH must be used for asbestos work. If other hazardous material will be encountered the cartridges used must be approved by NIOSH to protect against that specific hazard.

F. Contractor must also provide protective clothing as necessary for all hazards present. All head, eye, and foot protective equipment must be ANSI certified. Gloves must be resistant to the specific hazard present.

G. Any contaminated clothing must be removed in the dirty room. Clothes cannot be shaken or blown to remove asbestos. If disposable suits are used they must be disposed of as contaminated waste.

H. All PPE must be inspected before and after entering the containment for rips, tears, or other damage. If any PPE is damaged or worn it must be immediately replaced or repaired.

2.02 DECONTAMINATION UNIT

A. The contractor must provide a temporary decontamination unit. The decontamination unit must have a clean room, shower room (as needed for class I work), and dirty room. The decontamination unit must be attached to the containment in an air tight manner.

B. If a three-stage decontamination unit is employed, the shower for the decontamination unit must be equipped with a filter for waste water. This filter must be capable of filtering water to a minimum level of seven million structures per liter discharged. Use of water onsite must be negotiated with owner.

2.03 WARNING SIGNS AND LABELS

A. Warning signs and/or ribbon must be posted on the outside of every critical barrier and entry to the regulated area. If waste is stored outside of the work area then the waste storage site must be demarcated with danger ribbon and/or signs. Signs must contain all required parts specified in 29 CFR 1926.1101.

B. All waste leaving the regulated area must be labeled according to 29 CFR 1926.1101 and 49 CFR 172. The labels must contain warning statements about the dangers of asbestos and be placed in conspicuous areas. Bags must also have a generator label on them that includes: Name and location of where the waste came from, type of material, and contractor's name and contact information in accordance with 40 CFR 61 NESHAP.

C. It is the contractor's responsibility to ensure anyone working in or around the regulated area must be able to comprehend the warning signs and labels.

2.04 MATERIALS

A. Disposal containers must be leak tight in accordance with NESHAP regulations. Containers must be labeled according to all applicable regulations including, but not limited to, a class nine label and the contractors name and information. If polyethylene bags are to be used they shall be a minimum of 6 millimeters thick. Materials that are packaged in 6-millimeter polyethylene must be sealed completely and securely.

B. If glove bags are used they must be a minimum of 6 millimeters thick polyethylene. Glove bags must have two sealed, sleeved arms protruding into the bag. Inside the bag there must be a pouch that may be used to store tools away from bulk debris in the bottom of the bag.

C. Encapsulants must conform to US EPA requirements and contain no hazardous substances.

D. Tape used must be able to adhere to polyethylene sheeting in both wet and dry conditions.

2.05 TOOLS AND EQUIPMENT

A. The contractor is responsible for providing all tools and equipment necessary to complete the work. Tools shall be in good condition and meet all OSHA safety regulations. Any tool or equipment that plugs into an outlet must be equipped with a ground fault interrupter. All vacuums must be equipped with a HEPA filter.

B. If rental equipment is to be used the rental company must be notified of the intended use of the equipment. Written proof of notification must be submitted to the owner.

Part 3: Execution

3.01 REGULATED AREAS

A. Establish a regulated area in compliance with 29 CFR 1926.1101. Area must be demarcated with compliant signs or ribbon and access limited to authorized personnel.

B. Create a decontamination area in compliance with 29 CFR 1926.1101.

C. Designate an approved area outside of the regulated area where employees can eat and drink.

3.02 PERSONAL PROTECTIVE EQUIPMENT

A. Contractor must post approved work procedures, respiratory protection plan (RPP), and site safety health plan (SSHP) in an area immediately accessible to workers. A daily log must also be located outside the decontamination area that includes a regulated area sign in sheet and a record of daily hazard identification and safety meeting.

B. The competent person is responsible for ensuring that all work practices and safety procedures are followed by all individuals entering the regulated area.

3.03 REMOVAL

A. Removal of asbestos must be done according to the approved work plan. Any deviation from the plan must first be approved by the owner. All removal methods must comply with all applicable regulations.

3.04 AIR MONITORING

A. Personal, area, and environmental monitoring must be performed for each regulated area that work is performed in. Air monitoring must be done by the independent laboratory in compliance with 40 CFR 763 AHERA and 29 CFR 1926.1101 for worker protection.

B. All pumps used must be calibrated before and after use. Rotameters used for calibration cannot be built into the pump and must be themselves calibrated. Listed below is the minimum number of samples to be collected per area. More samples may be collected if overloading is suspected to occur or more than one eight-hour shift is done.

    a. Personal samples must be taken from a minimum of 25 percent of the workers. Two personal samples must be taken for each worker being sampled. One of which shall be a 30 minute excursion sample to be taken during the dirtiest portion of the day and the other shall be a time weighted average taken over the course of the rest of the work period. Selection of personnel for personal sampling shall be the worker who is likely to have the highest potential exposure.

b. At least three (3) air samples must be taken inside the containment. These samples shall be taken at locations based on the IHT's professional judgment. Samples shall be representative of the entire work area.

c. At least three (3) air samples must be taken adjacent to the regulated area in occupied areas. The samples should be taken at areas with the highest potential for accidental fiber release.

d. One (1) sample taken from every area of entry or egress into the containment.

e. One (1) sample taken from the exhaust of the HEPA equipped negative air machine. If more than one machine is used, the sample may be rotated between the exhausts as long as at least one third of the exhausts are monitored each day. Each exhaust is required to be sampled at least once every third day.

3.05 DISPOSAL

A. All asbestos waste generated from the work must be packaged and labeled as specified in section 2.04 of this document.

B. Waste must be disposed of at the approved permitted landfill specified in the work plan.

3.06 FINAL VISUAL INSPECTION

A. When the final cleaning has been completed the contractor shall notify the independent testing laboratory to perform the visual inspection. If the work area fails the visual inspection the contractor must re-clean the area for an additional visual inspection. The contractor is responsible for all costs associated with re-cleaning and conducting additional visual inspections.

B. For exterior roof work, once the final visual inspection shows that the area has been adequately cleaned barriers may be removed and the area released to unprotected personnel.

3.08 SUBSTANTIAL COMPLETION

A. Once the containment has been removed the contractor shall conduct an inspection of the area to verify that all ACM has been removed and no debris has been left behind. Following this inspection, the contractor shall prepare and sign a document verifying that all work has been completed according to the contract.

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 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Rooftop equipment bases and support curbs, if replacement is required.
   2. Wood blocking, cants, curbs and nailers.

B. Related Requirements:
   1. Division 01 Section "Cutting and Patching" for procedures related to Work requiring miscellaneous rough carpentry.
   2. Division 06 Section “Sheathing” for plywood sheathing and glass mat gypsum sheathing.

1.3 DEFINITIONS

A. Boards or Strips: Lumber of less than 2 inches nominal (38 mm actual) size in least dimension.

B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater size but less than 5 inches nominal (114 mm actual) size in least dimension.

1.4 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.
   1. 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 and net amount of preservative retained.
   2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber 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.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
   1. Factory mark each piece of lumber with grade stamp of grading agency.

B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2.
   1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:
   1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

2.3 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
   1. Blocking.
   2. Nailers.
   3. Rooftop equipment bases and support curbs, if replacement is required.
   4. Cants.

B. Dimension Lumber Items: Standard, Stud, or No. 3 grade lumber of any species.

C. Concealed Boards: 19 percent maximum moisture content of any of the following:
   1. Mixed southern pine or southern pine, No. 3 grade; SPIB.
   2. Hem-fir or hem-fir (north), Standard or No. 3 Common grade; NLGA, WCLIB, or WWPA.
   3. Spruce-pine-fir (south) or spruce-pine-fir, Standard or No. 3 Common grade; NeLMA, NLGA, WCLIB, or WWPA.
   4. Northern species, No. 3 Common grade; NLGA.
   5. Western woods, Standard or No. 3 Common grade; WCLIB or WWPA.

D. 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.

E. 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.

F. For cants select and cut lumber to eliminate to eliminate knots and other defects. Cut to shapes and sizes indicated.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
   1. Where carpentry is exposed to weather, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate nailers, blocking, shims and similar supports to comply with requirements for attaching other construction.

C. Provide blocking and shims as indicated and as required to support facing materials, fixtures, specialty items, and trim.

D. Sort and select lumber so that natural characteristics do 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.

E. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
   1. Use inorganic boron for items that are continuously protected from liquid water.
   2. Use copper naphthenate for items not continuously protected from liquid water.

F. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
   1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
   2. ICC-ES evaluation report for fastener.

G. 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.

3.2 WOOD CANT, CURB, 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. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches (38 mm) wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.3 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect miscellaneous rough carpentry from weather. If, despite protection, miscellaneous rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

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 01 Specification Sections, apply to this Section.
   1. If required the materials specified in this Section will be accomplished under Division 01 Section “Unit Prices.”

B. Provide sheathing if required to replace existing damaged sheathing if discovered during completion of the Work required in Division 07 Section “Preparation for Re-roofing,” and Division 01 Section “Unit Prices” or Division 01 Section “Alternates.”

1.2 SUMMARY

A. Section Includes:
   1. Plywood roof sheathing.
   2. Glass mat gypsum sheathing cover board.

B. Related Requirements:
   1. Division 01 Section “Alternates” for use of cover board in Alternate Work.
   2. Division 06 Section "Miscellaneous Rough Carpentry" for blocking, curs, cants and other rough carpentry related to installation of plywood sheathing.
   3. Division 07 Section “Preparation for Re-roofing” for determining the need for replacement sheathing and/or cover board.

1.3 SUBMITTALS

A. Products:
   1. Plywood roof sheathing.
   2. Glass mat gypsum sheathing cover board

1.4 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

A. Factory mark panels to indicate compliance with applicable standard.

2.2 REPLACEMENT ROOF SHEATHING

A. Plywood Sheathing: Either DOC PS 1 or DOC PS 2, Exterior, Structural I sheathing.
1. Span Rating: Not less than 32/16.
2. Nominal Thickness: 1/2-inch.

2.3 REPLACEMENT COVER BOARD

A. Glass-Mat Gypsum Sheathing Cover Board: ASTM C 1177/1177M. Provide DensDeck Roof Board as manufactured by Georgia Pacific Gypsum LLC or equivalent product manufactured by one of the following:
1. Approved manufacturers
a. Certainteed Corporation
b. Continental Building Products, LLC
c. National Gypsum Company
d. USG Corporation
2. Type and Thickness: Regular, 1/2 inch.
3. Size: Largest practical size to replace removed cover board but not less than 48-inches by 96-inches.

2.4 ADDITONAL COVER BOARD

A. Glass-Mat Gypsum Sheathing Cover Board: ASTM C 1177/1177M. Provide DensDeck Roof Board as manufactured by Georgia Pacific Gypsum LLC or equivalent product manufactured by one of the following:
1. Approved manufacturers
a. Certainteed Corporation
b. Continental Building Products, LLC
c. National Gypsum Company
d. USG Corporation
2. Type and Thickness: Regular, 5/8 inch.
3. Size: Largest practical size to replace removed cover board but not less than 48-inches by 96-inches.

2.5 FASTENERS

A. General: Provide fasteners of size and type required for the conditions indicated that comply with requirements specified in this article for material and manufacture.
1. For roof sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

D. Screws for Fastening Sheathing to Wood Framing: ASTM C 1002.

E. Fasteners for cover board: Provide cover board fasteners recommended by cover board manufacturer for conditions encountered. Existing fasteners maybe removed and reused if approved by the cover board manufacturer and the Owner’s Representative.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, if not indicated complying with the following:
1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.

D. Use common wire 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. Install fasteners without splitting wood.

E. Coordinate wall and parapet 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.

F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

G. 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.

3.2 WOOD STRUCTURAL PANEL (SHEATHING) INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:
1. Roof Sheathing:
   a. Nail to wood framing.
   b. Space panels 1/8 inch apart at edges and ends.

3.3 GLASS MAT GYPSUM SHEATHING COVER BOARD INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:

1. Cover Board:
   a. As recommended by the glass matt gypsum sheathing for the conditions encountered.

3.4 FIELD QUALITY CONTROL

A. Notify Owner’s Representative for inspection prior to covering sheathing and cover board Work. BAA Quality Assurance Program: Perform examinations, preparation, installation, testing, and inspections under ABAA's Quality Assurance Program. Coordinate test and inspection requirements in this article with Owner.

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 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Roof tear-off of roof systems at areas indicated on Drawings.
2. Temporary roofing membrane.
3. Roof re-cover preparation.
4. Removal of flashings and counterflashing.
5. Inspection of existing parapet and mechanical curb carpentry and sheathing.
6. Replacement and/or additional cover board.
7. Removal of roof drain assemblies.

B. Related Sections:
1. City of Homer Standard Construction Specifications 2011 Edition – General Provisions Section 10.06 “Legal Relations and Responsibilities” for temporary construction and environmental-protection measures for re-roofing preparation.
2. Division 01 Section “Unit Prices” for adjustment in Contract Amount required by removal and replacement of relatively small amounts of deteriorated materials, as determined by Owner’s Representative, discovered in the process of executing the Work specified in this Section.
3. Division 01 Section “Alternates” for adjustment in Contract Amount for deletions of existing roof membrane tear-off and/or the provision and installation of glass mat gypsum sheathing cover board for entire roof areas due to unacceptable existing conditions, as determined by Owner’s Representative, discovered during roof tear-off
4. Division 01 “Section Cutting and Patching” for general cutting and patching requirements.
5. Division 02 Section “Asbestos Abatement” for required abatement procedures related to existing asbestos containing membrane roofing.
6. Division 02 Section “Selective Demolition” for coordination of Owner provided HVAC, communications and electrical equipment removal and reinstallation.
7. Division 06 Sections “Miscellaneous Rough Carpentry” for rough carpentry and replacement materials and installation.
8. Division 07 Section for plywood sheathing and glass mat sheathing cover board.
9. Division 07 Section “Thermal Insulation” for loose fill fiberglass insulation and extruded polystyrene rigid insulation.
10. Division 22 Section “Storm Drainage Piping Specialties” for replacement roof drains.

1.3 UNIT PRICES

A. Unit Prices: In the event that the roof tear-off reveals existing materials that have deteriorated or been damaged to the point at which their useful life is significantly shorter than the life span of new materials as determined by the Owner's Representative, those materials shall be removed and replaced and the Contract Amount will be adjusted based on measured quantities of the materials to be removed and replaced multiplied by the appropriate Unit Price(s).

B. Unit Price No. 1: Unit price for demolition of existing wet fiberglass insulation, and replacement with new loose fill fiberglass insulation as specified in Division 07 Section "Thermal Insulation.," and under Division 01 Section "Unit Prices."

C. Unit Price No. 2: Unit price for demolition of existing wet rigid insulation, and replacement with new extruded polystyrene insulation as specified in Division 07 Section "Thermal Insulation" and under "Unit Prices."

D. Unit Price No. 3: Unit Price for demolition of existing deteriorated plywood sheathing roof deck, and replacement with new plywood sheathing roof deck, as specified in Division 06 Section "Sheathing" and under Division 01 Section "Unit Prices."

E. Unit Price No.4: Unit price for demolition of existing deteriorated cover board, and replacement with new glass mat gypsum sheathing cover board and under Division 01 Section "Unit Prices."

1.4 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.5 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 Systems:
1. For Roof Areas A, B, and E the top layer is an asbestos containing torch-down rolled bitumen on top of the built-up roofing system (contractor verify material).
2. For Roof Areas C and D the Built-up Roofing System is asphaltic built-up roofing over plywood roof sheathing.

C. Roof Tear-Off: Removal of existing membrane roofing system from deck.

D. Demolish: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.

E. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, store as necessary, prepare for reuse, and reinstall where indicated.

F. Existing to Remain: Existing items of construction that are not indicated to be removed.

1.6 ACTION SUBMITTALS

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

B. Temporary Roofing: Include Product Data and description of temporary roofing system. If temporary roof will remain in place, submit surface preparation requirements needed to receive permanent roof, and submit a letter from roofing membrane manufacturer stating acceptance of the temporary membrane and that its inclusion will not adversely affect the roofing system's resistance to fire and wind. Temporary roofing will be allowed only in emergency weather situations where unanticipated weather preclude installation of new roofing assembly after existing roofing assembly has been removed.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by re-roofing operations. Submit before Work begins.

C. Landfill Records: Indicate receipt and acceptance of demolished roofing materials and hazardous wastes, such as asbestos-containing materials, if any, by a landfill facility licensed to accept them.

1.8 QUALITY ASSURANCE

A. Regulatory Requirements:
1. Comply with governing EPA notification regulations before beginning membrane roofing removal.
2. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Re-roofing Conference: Conduct conference at Project site.
1. Meet with Owner; Owner’s Representative, Owner's insurer if applicable; testing and inspecting agency representative; roofing system manufacturer's representative; deck Installer; roofing Installer including project manager, superintendent, and foreman; and installers whose work interfaces with or affects re-roofing including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing system tear-off and replacement including, but not limited to, the following:
    a. Re-roofing 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. Owner provided HVAC equipment, electrical, lighting, and communication equipment removal, storage and reinstallation.
d. Existing roof drains and roof drainage during each stage of re-roofing, and roof drain plugging and plug removal requirements.
e. Temporary replacement of existing roof drains and domes to be removed to work with temporary roofing.
f. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
g. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
h. Structural loading limitations of deck during re-roofing.
i. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect re-roofing.
j. Removal, storage and reinstallation of existing HVAC equipment.
k. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
l. Discovery of asbestos-containing materials, if any.
m. Governing regulations and requirements for insurance and certificates if applicable.
n. Existing conditions that may require notification of Owner’s Representative and Owner’s Representative before proceeding.

1.9 PROJECT CONDITIONS

A. Owner will occupy portions of building immediately below re-roofing area. Conduct re-roofing 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.
   2. Before working over structurally impaired areas of deck, if any, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated before proceeding with work over the impaired deck area.

B. Protect building to be re-roofed, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from re-roofing operations.

C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

D. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.

E. Limit construction loads on roof to 1,000 pounds total for rooftop equipment, wheel loads not to exceed: 200 pounds per wheel for four wheeled equipment; 500 pounds per wheel for two wheeled equipment; and 40 pounds per square foot non-concurrent with roof snow loads for uniformly distributed loads.

F. Weather Limitations: Proceed with re-roofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

G. "Soft spots" may be encountered that could indicate deterioration of the existing plywood decking. Should such "soft spots" be encountered by the Contractor, he shall notify the Owner's Representative within 24 hours of discovery and direct construction traffic away from "soft spot."

H. Hazardous Materials: The roof has been surveyed for asbestos and the built-up membrane of the roof were found to contain asbestos. Treat all existing membrane roofing as required in Division 02 Section "Asbestos Abatement."
1. Do not disturb hazardous materials or items suspected of containing hazardous materials except according to procedures specified elsewhere in the Contract Documents.
2. Coordinate with hazardous material remediation subcontractor to prevent water from entering existing roofing system or building.

PART 2 - PRODUCTS

2.1 TEMPORARY ROOFING MATERIALS (FOR EMERGENCY USE ONLY)

A. Design and selection of materials for temporary roofing are responsibilities of Contractor.

B. Sheathing Paper: Red-rosin type, minimum 3 lb/100 sq. ft.

C. Base Sheet: ASTM D 4601, Type II, non-perforated, asphalt-impregnated and -coated, glass-fiber sheet.

D. Glass-Fiber Felts: ASTM D 2178, Type IV, asphalt-impregnated, glass-fiber felt.

E. Asphalt Primer: ASTM D 41.

F. Roofing Asphalt: ASTM D 312, Type III or IV.

G. Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approvals' RoofNav.

H. Roof Drain Pans and Domes: Temporary units for emergency use with temporary roof membrane.

2.2 INFILL AND REPLACEMENT MATERIALS

A. Use infill materials, if any, matching existing roofing system materials unless otherwise indicated.

B. General: Infill and replacement re-roofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new membrane roofing system.

C. Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approval's "Approval Guide."

D. Metal Flashing Sheet: Metal flashing sheet is specified in Division 07 Section "Sheet Metal Flashing and Trim."

E. Wood blocking, curbs, cants, blocking, shims, and nailers are specified in Division 06 Section “Miscellaneous Rough Carpentry."

F. Replacement (unit price) plywood roof sheathing, if required, is specified in Division 06 Section "Sheathing."

G. Replacement (unit price) or additional (alternates) cover boards, if required: as specified in Division 06 Section "Sheathing."

PART 3 - EXECUTION

3.1 PREPARATION

A. Protection of In-Place Conditions:
1. Protect existing roofing system that is not to be re-roofed at all locations that may be affected by construction traffic or materials storage.
2. Loosely lay 1-inch-minimum thick, EPS insulation over existing roofing in areas not to be reroofed.
    a. Loosely lay 15/32-inch plywood or OSB panels over EPS. Extend EPS past edges of plywood or OSB panels a minimum of 1 inch.
3. Limit traffic and material storage to areas of existing roofing that have been protected.
4. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.
5. For roof areas not to receive new membrane, comply with requirements of existing roof system manufacturer's warranty requirements.

B. Coordinate with Owner to shut down and proceed with removal of air-intake and exhaust equipment to be removed and stored for reinstallation. Contractor shall temporarily cover and seal temporarily openings remaining after equipment removal and before proceeding with re-roofing work that could affect indoor air quality or activate smoke detectors in the ductwork.

C. Coordinate with Owner to shut down and disconnect lighting and communications equipment to be removed and stored for reinstallation.

D. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.

E. Due to the presence of inaccessible ceilings in much of the building, rigorous inspection of the decking without destructive measures was not possible. If after removal of the existing roofing membrane, initial inspection warrants, as determined by Owner's Representative, a Change Order may be executed to provide inspection access openings for Owner's Representative by removing full existing 4-foot by 8-foot plywood roof sheathing panels in nine different locations as directed by Owner's Representative.
   1. It is anticipated that two inspection access openings will be required in each of the four major roof sections ("A", "B", "D", and "E") and one in the smaller section "C.
   2. Notify Owner's Representative 72 hours prior to removing plywood to provide openings to allow scheduling of Owner's Representative's inspection(s).
   3. Upon completion of Owner's Representative's inspection(s) reinstall existing roof sheathing panels to match original installation.

F. Lower removed/demolished roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.

G. Test existing roof drains to verify that they are not blocked or restricted.
   1. Immediately notify Owner's Representative of any blockages or restrictions.

H. Maintain temporary roof drains and existing roof drains to remain 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 are 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.

I. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.

J. Coordinate with Owner's Representative to assure rooftop utilities and service piping are shut off before beginning the Work.

K. Roof Tear-off: Where indicated on Drawings, remove existing roofing and other roofing system components down to the existing roof sheathing or cover board as indicated.
   1. Demolish existing base flashings and counter flashings.
   2. Demolish existing perimeter edge flashing and gravel stops.
   3. Demolish existing copings/cap flashings.
   4. Demolish expansion-joint covers.
   5. Demolish flashings at pipes, curbs, mechanical equipment, and other penetrations.
   6. Demolish/remove portions of roof drains indicated on Drawings to be removed. Protect roof drains indicated to remain.
   7. Demolish wood blocking, curbs, and nailers as indicated. Do not demolish wood blocking, cants, and nailers indicated to be retained.
   8. Remove fasteners from deck.
   9. Remove wet or damp materials below existing roofing and above deck as directed by Owner's Representative.

a. Removal is paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.

10. Inspect wood blocking, curbs, and nailers for deterioration and damage.
    a. If wood blocking, curbs, or nailers have deteriorated, immediately notify Owner's Representative.
    b. Removal is paid for by adjusting the Contract Sum in accord with the Contract Documents.
11. Remove fasteners from deck.

3.2 ITEMS TO BE RELOCATED AND REINSTALLED

A. Disconnect items to be removed/relocated, stored and reinstalled. If removal/relocation is to facilitate installation of new roof membrane extent of relocation is as necessary for Contractor's convenience. Safely store and protect items to be re-installed.

3.3 DECK PREPARATION

A. Inspect existing deck sheathing or cover board after tear-off of membrane roofing system.

B. If broken or loose existing fasteners that existing secure deck sheathing or cover board panels to one another or to substrate are observed or if existing deck sheathing or cover board appears or feels soft or inadequately attached, immediately notify Owner's Representative. Do not proceed with installation until directed by Owner's Representative.

C. If existing deck sheathing or cover board 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.

D. If directed by the Owner's Representative, provide and install replacement deck sheathing or cover board securement as directed by Owner's Representative and as specified in Division 06 Section "Sheathing". See Division 1 Section, "Unit Prices."

E. If directed by Owner's Representative provide and install additional cover boards. Additional cover board is specified in Division 06 Section "Sheathing." See Division 1 Section "Alternates."

3.4 TEMPORARY ROOFING MEMBRANE (FOR EMERGENCY USE ONLY)

A. Install approved temporary roofing membrane over area to be re-roofed.

B. Install temporary roofing membrane over area to be re-roofed. Install two glass-fiber felts. Mechanically fasten base sheet and install a glass-fiber felt, lapping each sheet 19 inches over preceding sheet. Embed glass-fiber felt in a solid mopping of hot roofing asphalt applied within equiviscous temperature range. Glaze-coat completed surface with hot roofing asphalt.

C. Remove temporary roofing membrane before installing new roofing membrane.

D. Prepare the temporary roof to receive new roofing membrane according to approved temporary roofing membrane proposal. Restore temporary roofing membrane to watertight condition. Obtain approval for temporary roof substrate from roofing membrane manufacturer and Owner's Representative before installing new roof.

3.5 TEMPORARY ROOF DRAIN PANS AND DOMES/STRAINERS

A. Install temporary roof drain pans and domes/strainers compatible with existing roof drain pipe and temporary roofing. Use of products to match existing and serve as permanent roof drain pans and domes/strainers is acceptable at Contractor's option.

3.6 EXISTING BASE FLASHINGS

A. Remove existing base flashings around parapets, curbs, walls, penetrations, and elsewhere as indicated.
   1. Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris.

B. Inspect parapet sheathing for deterioration and damage. If parapet sheathing has deteriorated, immediately notify Owner's Representative.

3.7 FASTENER PULL-OUT TESTING

A. If required by the entity providing the roofing system warranty, retain independent testing and inspecting agency to conduct fastener pull-out tests according to SPRI FX-1, and submit test report to Owner's Representative and roofing membrane manufacturer before installing new membrane roofing system.
   1. Obtain roofing membrane manufacturer's approval to proceed with specified fastening pattern. Roofing membrane manufacturer may furnish revised fastening pattern commensurate with pull-out test results.

3.8 DISPOSAL

A. Collect demolished materials and place 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 is not permitted.

B. Transport and legally dispose of demolished materials off Owner's property.

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 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Extruded polystyrene foam-plastic board.
   2. Loose-fill insulation.

B. Related Requirements:
   1. Division 01 Section “Unit Prices” and Division 07 Section “Preparation for Re-roofing” for conditions and procedures related to provision of thermal insulation.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

A. Measurements and calculation indicating the quantity of each type of insulation to be provided.

B. Evaluation Reports: For foam-plastic insulation, from ICC-ES.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect foam-plastic board insulation as follows:
   1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
   2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site until just before installation time.
   3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 - PRODUCTS

2.1 EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD

A. Extruded polystyrene boards in this article are also called "XPS boards." Roman numeral designators in ASTM C 578 are assigned in a fixed random sequence, and their numeric order does not reflect increasing strength or other characteristics.

B. Extruded Polystyrene Board, Type IV (Rigid Insulation): ASTM C 578, Type IV, 25-psi minimum compressive strength; unfaced; maximum flame-spread and smoke-developed indexes of 25 and 450, respectively, per ASTM E 84.
   1. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

2.2 LOOSE-FILL INSULATION

A. Glass-Fiber Loose-Fill Insulation: ASTM C 764, Type I for pneumatic application; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E 84.

2.3 ACCESSORIES

A. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

2.4 INSULATION FASTENERS

A. Install new insulation with existing fasteners removed from existing insulation to be removed.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

3.3 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

A. Loose-Fill Insulation: Apply according to ASTM C 1015 and manufacturer's written instructions. Level horizontal applications to uniform thickness as indicated, lightly settle to uniform density, but do not compact excessively.
   1. Thickness: To match existing insulation.

B. Extruded Polystyrene Insulation: Install extruded polystyrene insulation in same manner as existing insulation to be removed was installed.

3.4 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

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 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Adhered polyvinyl-chloride (PVC) roofing system.
2. Walkway material
3. Seismic joint insulation
4. Plumbing vent collar/flashing
5. Flue Boots

B. Related Requirements:
1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers, cants, curbs, and blocking.
2. Division 07 Section "Preparation for Re-Roofing" for requirements for temporary roof membrane not specified in this Section including discovery and replacement of damaged existing materials.
3. Division 06 Section “Sheathing” for replacement (unit price) and plywood sheathing and replacement (unit price) and additional (alternates) glass mat gypsum sheathing cover board to receive PVC roofing.
4. Division 07 Section "Sheet Metal Flashing and Trim" for metal roof flashings and counter-flashings.

1.3 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.

1.4 PREINSTALLATION MEETINGS

A. Pre-installation Roofing Conference: Conduct conference at Project site. Pre-installation meeting specified in the Section may be combined with Preparation for Re-roofing Conference specified in Division 07 Section “Preparation for Re-roofing” at the Contractor’s option provided this approach is acceptable to the roofing manufacturer.
1. Meet with Owner’s Representative, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
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. Discuss coordination of examination of deck substrate conditions and finishes for compliance with requirements, including flatness and fastening with roof tear off operations.
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 affects 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 Owner's reinstallation procedures for HVAC, lighting, electrical, and communications equipment to minimize risk of damage to new roof membrane and flashing.
10. Review roof observation and repair procedures after roofing installation.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.
1. Roofing membrane
2. Bonding adhesive
3. Fasteners
4. Plumbing vent pipe flashing/collars
5. Flue boots
6. PVC cut edge adhesive
7. Test data and calculations as required to indicate conformance with the specified performance criteria.
   a. Test data and calculations shall address:
      1) Corner uplift pressure;
      2) Perimeter uplift pressure.
      3) Field-of-roof uplift pressure
8. Calculations shall be prepared by a professional Engineer registered to practice in the State of Alaska.

B. Installation/Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work, including:
1. Base flashings and membrane terminations.
2. Heat welding to PVC coated metal flashing.
3. Membrane joint details.
4. PVC Flashing and joint details and:
   a. Flue boot detail
   b. Plumbing vent flashing/collar detail
   c. PVC seismic control joint detail
5. Roof plan showing orientation of existing cover boards and plywood roof sheathing and orientation of roofing, fastening spacings, and patterns for mechanically fastened roofing.
6. Existing insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples for Verification: For the following products:
1. Sheet roofing of color specified, including T-shaped side and end lap seam.
2. PVC membrane joint seams

3. PVC Flashing including:
   a. Pipe boots
   b. Plumbing vent flashing
4. Roof seismic joint insulation.
5. Walkway pads

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and manufacturer.

B. Manufacturer Certificates:
1. Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
   a. Submit evidence of compliance with performance requirements.
2. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.
3. Signed by roofing manufacturer certifying PVC coated metal flashing material and fabricator are approved by manufacturer.

C. Product Test Reports: For components of roofing system, for tests performed by manufacturer and witnessed by a qualified testing agency.

D. Research/Evaluation Reports: For components of roofing system, from ICC-ES.

E. Field quality-control reports.

F. Sample Warranties: For manufacturer's special warranties.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing system to include in maintenance manuals.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is UL listed or FM Global approved for roofing system identical to that used for this Project.

B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
1. Qualified mechanical equipment reinstallation personnel including refrigerant installer.
2. Qualified roof drain installer.

1.9 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, approval or listing agency markings, and directions for storing and mixing with other components.

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 roof insulation materials 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.

1.10 FIELD 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.

1.11 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
   1. Special warranty includes membrane roofing, bonding adhesive, PVC edge sealant, base flashings, roof fasteners, plumbing vent flashing, pipe boots, roofing accessories, and other components of roofing system.
   2. Warranty Period: 25 years from date of Substantial Completion.

B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as membrane roofing, bonding adhesive, PVC edge sealant, base flashing, fasteners, roof drains, plumbing vent flashing, pipe boots and walkway products, for the following warranty period:
   1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain components including roof insulation and fasteners, plumbing vent flashing/collars, and flue boots for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. General Performance: Installed roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to

defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.

1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.

B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.

C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.

1. Calculate Corner Uplift Pressure, Perimeter Uplift Pressure, and Field-of Roof Uplift Pressure based the following:
   a. Windspeed: 150 miles per hour (Basic Wind Speed IBC 2012, ASCE 7-10).
   b. Exposure (IBC 1609.4): B

D. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

2.3 PVC ROOFING

A. Roofing system materials, including sheet metal flashings shall be approved by manufacturer supplying roofing system and warranty.

B. PVC Sheet: ASTM D4434/D4434M, Type II, glass-fiber reinforced, felt backed.

C. Basis of Design Product: Subject to compliance with requirements, provide Sika Sarnafil G410 EnergySmart, PVC sheet membrane with fiber glass reinforcement as manufactured by Sarnafil Inc. or comparable product manufactured by one of the following:

1. Carlisle SynTec, Incorporated.
2. Johns Manville.
3. Sarnafil Inc.

D. Thickness: 80 mils, minimum.

E. Exposed Face Color: Manufacture’s standard “gray.”

2.4 AUXILIARY ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing.

1. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content:
   a. Plastic Foam Adhesives: 50 g/L.

b. Gypsum Board and Panel Adhesives: 50 g/L.
c. Multipurpose Construction Adhesives: 70 g/L.
d. Fiberglass Adhesives: 80 g/L.
e. Single-Ply Roof Membrane Adhesives: 250 g/L.
f. PVC Welding Compounds: 510 g/L.
g. Adhesive Primer for Plastic: 650 g/L
h. Single-Ply Roof Membrane Sealants: 450 g/L.
i. Non-membrane Roof Sealants: 300 g/L.
j. Sealant Primers for Nonporous Substrates: 250 g/L.
k. Sealant Primers for Porous Substrates: 775 g/L.
l. Other Adhesives and Sealants: 250 g/L.

B. Plumbing Vent Flashing/Collars: Roofing manufacturer’s standard or as recommended by the manufacturer for the conditions indicated.

C. Flue Boot: Roofing manufacturer’s standard or as recommended by the manufacturer for the conditions indicated.

D. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet.

E. Bonding Adhesive: Manufacturer's standard.

F. Seismic Joint Foam Tube: As recommended by roofing manufacturer.

G. Miscellaneous Accessories: Provide pourable sealers, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.5 WALKWAYS

A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway rolls, approximately 3/16 inch thick and acceptable to roofing system manufacturer.

B. Basis of Design Product: Subject to compliance with requirements provide Sarnatred polyester reinforced, weldable PVC membrane with surface embossment as manufactured by as by Sarnafil Inc. or comparable product manufactured or specifically approved in writing by one of the following:
1. Carlisle SynTec, Incorporated.
2. Johns Manville.
3. Sarnafil Inc.

C. Thickness: 0.096-inch minimum.

D. Width: Not less than 3 feet 4 inches.

E. Color: Manufacturer’s standard to contrast with roof membrane color.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work:
   1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
   2. Verify that wood blocking, cants, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
   3. Verify that any damaged sections of existing cover boards and roof sheathing have been repaired or replaced.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 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.

3.3 ROOFING INSTALLATION, GENERAL

A. Install roofing system according to roofing system manufacturer's written instructions. FM Approvals' RoofNav assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.

B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

C. Install roofing and auxiliary materials to tie in to existing roofing to maintain weather-tightness of transition.

3.4 ADHERED ROOFING INSTALLATION

A. Adhere roofing over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing and allow material to relax before retaining.
   1. Install sheet according to ASTM D 5036.

B. Start installation of roofing in presence of roofing system manufacturer's technical personnel.

C. Accurately align roofing, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Bonding Adhesive: Apply to substrate and underside of roofing at rate required by manufacturer, and allow to partially dry before installing roofing. Do not apply to splice area of roofing.

E. In addition to adhering, mechanically fasten roofing securely at terminations, penetrations, and perimeter of roofing.

F. Apply roofing with side laps shingled with slope of roof deck where possible.

G. Seams: Clean seam areas, overlap roofing, and hot-air weld side and end laps of roofing and sheet flashings according to manufacturer's written instructions, to ensure a watertight seam installation.
   1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet.
   2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.
   3. Repair tears, voids, and lapped seams in roofing that do not comply with requirements.

H. Spread sealant bed over deck-drain flange at roof drains, and securely seal roofing in place with clamping ring.

3.5 BASE FLASHING INSTALLATION

A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.

B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.

C. At locations indicated on approved manufacturer installation drawings heat weld membrane to PVC coated metal flashings.

D. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

E. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.

F. Terminate and seal top of sheet flashings [and mechanically anchor to substrate through termination bars].

3.6 ROOF DRAIN INSTALLATION

A. Install roof drain pans and strainers in accordance with approved shop drawing and manufacturers instructions. Attach roof drain pans to existing roof drain pipe per manufacturer’s instructions to achieve leak proof connection.

3.7 PLUMBING VENT FLASHING/COLLAR INSTALLATION

A. Install plumbing vent flashings/collars in accordance with approved shop drawings and manufacturer’s instruction to provide a waterproof installation.

3.8 FLUE BOOT INSTALLATION

A. Install flue boots in accordance with approved shop drawings and manufacturer’s instruction to provide a waterproof installation.

3.9 SIESMIC CONTROL JOINT INSTALLATION

A. Install seismic control joint with foam tube in accordance with approved shop drawings and manufacturer’s instruction to provide a waterproof installation.

3.10 WALKWAY INSTALLATION

A. Flexible Walkways: Install walkway products in locations and dimensions indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.11 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to inspect substrate conditions, surface preparation, membrane application, flashings, protection, and drainage components, and to furnish reports to Owner’s Representative.
   1. Electric Field Vector Mapping (EFVM): Testing agency shall survey entire roof area for potential leaks using electric field vector mapping (EFVM).

B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

C. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.

D. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.12 PROTECTING AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Owner’s Representative and 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.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.13 ROOFING INSTALLER'S WARRANTY (sample to be completed)

A. WHEREAS _____ of _____, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
1. Owner: <Insert name of Owner>.
2. Address: <Insert address>.
3. Building Name/Type: <**Insert information**>.
4. Address: <Insert address>.
5. Area of Work: <**Insert information**>.
6. Acceptance Date: _____.
7. Warranty Period: <**Insert time**>.
8. Expiration Date: _____.

B. 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,

C. 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.

D. 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. peak gust wind speed exceeding 110 mph;
   c. fire;
   d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
   e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
   f. vapor condensation on bottom of roofing; and
   g. 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 have been paid by Owner or by another responsible party so designated.
3. 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. 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.

E. IN WITNESS THEREOF, this instrument has been duly executed this _____ day of _____, _____.

1. Authorized Signature: _____.
2. Name: _____.
3. Title: _____.

END OF SECTION

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Formed low-slope roof sheet metal fabrications.
   2. Formed wall/roof sheet metal fabrications.
   3. Formed equipment support flashing.

B. Related Requirements:
   1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers, cants, curbs, and blocking.
   2. Division 07 Section “Polyvinyl-Chloride (PVC) Roofing.

1.3 COORDINATION

A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.

B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.
   1. Review construction schedule. Verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   2. Review special roof details, roof drainage, roof-penetration flashing, equipment curbs, and condition of other construction that affect sheet metal flashing and trim.
   3. Review requirements for insurance and certificates if applicable.
   4. Review sheet metal flashing observation and repair procedures after flashing installation.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.

B. Shop Drawings: For sheet metal flashing and trim.
   1. Include plans, elevations, sections, and attachment details.
   2. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.
   3. Distinguish between unfinished and prefinished (PVC coated) material.
   4. Include identification of material, thickness, weight, and finish for each item and location in Project.
   5. Include details for forming, including profiles, shapes, seams, and dimensions.
   6. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
   7. Include details of termination points and assemblies.
   8. Include details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction from fixed points.
   9. Include details of roof-penetration flashing.
   10. Include details of edge conditions, including eaves, ridges, valleys, rakes, crickets, and counterflashings as applicable.
   11. Include details of special conditions.
   12. Include details of connections to adjoining work.
   13. Detail formed flashing and trim at scale of not less than 3 inches per 12 inches.

C. Samples for Initial Selection: For each type of sheet metal and accessory indicated with factory-applied finishes.

D. Samples for Verification: For each type of exposed finish.
   1. Sheet Metal Flashing: 12 inches long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments. Provide samples with finish indicated on the Drawings.
      a. Unfinished galvanize steel.
      b. Prefinished, PVC coated.
   2. Trim, Metal Closures, Expansion Joints, Joint Intersections, and Miscellaneous Fabrications: 12 inches long and in required profile. Include fasteners and other exposed accessories.
   3. Unit-Type Accessories and Miscellaneous Materials: Full-size Sample.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For fabricator.

B. Product Certificates: For each type of coping and roof edge flashing that is SPRI ES-1 tested and FM Approvals approved.

C. Product Test Reports: For each product, for tests performed by a qualified testing agency.

D. Sample Warranty: For special warranty.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sheet metal flashing and trim, and its accessories, to include in maintenance manuals.

1.8 QUALITY ASSURANCE

A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
   1. For copings and roof edge flashings that are SPRI ES-1 tested and FM Approvals approved, shop shall be listed as able to fabricate required details as tested and approved.
   2. Fabricator shall be approved by PVC membrane manufacturer.

B. 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.

C. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.9 WARRANTY

A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
      a. Color fading more than 5 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.
      d. Failure of heat welded seams to PVC roof membrane.
   2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. FM Approvals Listing: Manufacture and install coping (cap flashing), and roof edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-120]. Identify materials with name of fabricator and design approved by FM Approvals.

D. SPRI Wind Design Standard: Manufacture and install copings roof edge flashings tested according to SPRI ES-1 and capable of resisting the following design pressure:

1. Design Pressure: Design uplift pressure for roof edges 102,2 psf unfactored or 61.3 psf Allowable Stress Design (IBC 2012, ASCE 7-10)

E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping

B. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet according to ASTM A 653/A 653M, G90 coating designation or aluminum-zinc alloy-coated steel sheet according to ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40; pre-painted by coil-coating process to comply with ASTM A 755/A 755M.
1. Surface: Smooth, flat.
2. Exposed Coil-Coated Finish: None unless indicated otherwise.
3. Prefinished where indicated:
   a. Polyvinyl-chloride Coating: PVC coated with a laminate of non-reinforced PVC flashing suitable for heat welding of PVC roof membrane directly to the coated meta. PVC coating shall be approved by PVC roof membrane manufacturer for the use indicated.
4. Color: As selected by Owner’s Representative from not less than three manufacturer’s standard colors.
5. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil.

2.3 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
   a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
   b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
   c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

2. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip Galvanized Steel (Metal) according to ASTM A 153/A 153M or ASTM F 2329.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, non-sag, nontoxic, non-staining tape 1/2 inch wide and 1/8 inch thick.

D. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane, polysulfide, silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

2.4 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in 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 to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners 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 indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

D. Sealant Joints: Where movable, non-expansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.

E. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use.

F. Do not use graphite pencils to mark metal surfaces.

2.5 ROOF-DRAINAGE SHEET METAL FABRICATIONS

A. Parapet Scuppers: Fabricate scuppers to dimensions required, with closure flange trim to exterior, 4-inch- wide wall flanges to interior, and base extending 4 inches beyond cant or tapered strip into field of roof. Fabricate from the following materials:
   1. Galvanized Steel: 0.0280 inch thick.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

A. Roof Edge Flashing (Gravel Stop) and Fascia Cap: Fabricate in minimum 96-inch-long, but not exceeding 12-foot-long sections. Furnish with 6-inch-wide, joint cover plates. Shop fabricate interior and exterior corners.
   1. Joint Style: Overlapped, 4 inches Butted with expansion space and 6-inch-wide, concealed backup plate.
   2. Fabricate from the Following Materials:
      a. Galvanized Steel (Metal): 0.0280 inch thick.

B. Copings: Fabricate in minimum 96-inch-long, but not exceeding 12-foot-long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and interior leg. Miter corners, fasten and seal watertight. Shop fabricate interior and exterior corners.
   1. Coping Profile: As indicated on the Drawings and similar to Fig 3-4A, Fig 3-4B, Fig 3-4C, Fig 3-4D, Fig 3-4E, Fig 3-4F, Fig 3-4G according to SMACNA's “Architectural Sheet Metal Manual" as appropriate.
   2. Joint Style: Butted with expansion space and 6-inch-wide, concealed backup plate.
   3. Fabricate from the Following Materials:
      a. Galvanized Steel (Metal): 0.040 inch thick.

C. Base Flashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
   1. Galvanized Steel (Metal): thick.

D. Counterflashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
   1. Galvanized Steel (Metal): 0.022 inch thick.

E. Flashing Receivers: Fabricate from the following materials:
   1. Galvanized Steel (Metal): 0.022 inch thick.

F. Roof-Penetration Flashing: Roofing manufacturer’s standard or recommended PVC flashing for plumbing vents and TPO boot for pipes see Division 07 Section “Polyvinyl-Chloride (PVC) Roofing”.

G. Roof-Drain Flashing: Fabricate from the following materials: PVC flashing, see Division 07 Section “Polyvinyl-Chloride (PVC) Roofing”.

2.7 MISCELLANEOUS SHEET METAL FABRICATIONS

A. Equipment Support Flashing: Fabricate from the following materials:
   1. Galvanized Steel (Metal): 0.028 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
   1. Verify compliance with requirements for installation tolerances of substrates.
   2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
   3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and 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, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, 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 non-continuous cleats (clips), if any, not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
   4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
   5. Torch cutting of sheet metal flashing and trim is not permitted.
   6. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
   1. Coat concealed side of sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.
   1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
   2. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate [wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

F. Seal joints as required for watertight construction.
   1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.

3.3 ROOF FLASHING INSTALLATION

A. General: Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and cited sheet metal standard. Provide concealed fasteners where possible, and set units true to line, levels, and slopes. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch.

C. Copings/Cap Flashings: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated.
   1. Interlock exterior bottom edge of coping with continuous cleat (clip) anchored to substrate at 16-inch (400-mm)] centers.
   2. Anchor interior leg of coping with washers and screw fasteners through slotted holes at 24-inch centers.

D. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.

E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with sealant recommended by flashing manufacturer for conditions indicated and clamp flashing to pipes that penetrate roof.

3.4 MISCELLANEOUS FLASHING INSTALLATION

A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with elastomeric sealant to equipment support member.

3.5 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 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 manufacturer's written installation instructions. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended by sheet metal flashing and trim manufacturer. Maintain sheet metal flashing and trim in 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

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Metal roof drains.
   2. Miscellaneous storm drainage piping specialties.

B. Related Requirements:
   1. Division 07 Section “Preparation for Re-roofing” for removal of existing drains.
   2. Division 07 Section "Sheet Metal Flashing and Trim" for penetrations of roofs.
   3. Division 07 Section Polyvinyl-chloride (PVC) Roofing for roof membrane.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 QUALITY ASSURANCE

A. Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.

PART 2 - PRODUCTS

2.1 REPLACEMENT METAL ROOF DRAINS

A. Provide roof drains of sizes and shapes to match the existing roof drains indicated to be demolished.
   1. Record sump (pan) size and body dimensions of each roof drain to be demolished.
   2. Contractor verify replacement size to match existing and provide appropriate size as specified below.

B. Cast-Iron, Large-Sump, General-Purpose Roof Drains:
   1. Standard: ASME A112.6.4.
   2. Body Material: Cast iron.
   3. Dimension of Body: to match existing drain to be removed.
   4. Combination Flashing Ring and Gravel Stop: to match existing drain being removed.
   5. Flow-Control Weirs: to match existing drain to be removed.
   6. Outlet: Bottom.

7. Outlet Type: to match existing to be removed.
8. Extension Collars: to match existing to be removed.
9. Underdeck Clamp: to match existing to be removed.
10. Sump Receiver Plate: to match existing to be removed.
11. Dome/Strainer Material: to match existing to be removed.

C. Cast-Iron, Medium-Sump, General-Purpose Roof Drains:
1. Standard: ASME A112.6.4.
2. Body Material: Cast iron.
3. Dimension of Body: to match existing drain to be removed.
4. Combination Flashing Ring and Gravel Stop: to match existing drain being removed.
5. Flow-Control Weirs: to match existing drain to be removed.
6. Outlet: Bottom.
7. Outlet Type: to match existing to be removed.
8. Extension Collars: to match existing to be removed.
9. Underdeck Clamp: to match existing to be removed.
10. Sump Receiver Plate: to match existing to be removed.
11. Dome/Strainer Material: to match existing to be removed.

D. Cast-Iron, Small-Sump, General-Purpose Roof Drains:
1. Standard: ASME A112.6.4.
2. Body Material: Cast iron.
3. Dimension of Body: to match existing drain to be removed.
4. Combination Flashing Ring and Gravel Stop: to match existing drain being removed.
5. Flow-Control Weirs: to match existing drain to be removed.
6. Outlet: Bottom.
7. Outlet Type: to match existing to be removed.
8. Extension Collars: to match existing to be removed.
9. Underdeck Clamp: to match existing to be removed.
10. Sump Receiver Plate: to match existing to be removed.
11. Dome/Strainer Material: to match existing to be removed.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install roof drains at locations of existing drain to be removed.
1. Install flashing collar or flange of roof drain to prevent leakage between drain and adjoining roofing. Maintain integrity of waterproof membranes where penetrated.
2. Install expansion joints, if indicated, in roof drain outlets.

3.2 CONNECTIONS

A. Comply with requirements for piping required by International Plumbing Code. Drawings indicate general arrangement of piping, fittings, and specialties.

3.3 PROTECTION

A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.

B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION

X. Submittals

(Due within two (2) days after bid)

CONTRACTOR'S QUESTIONNAIRE

NOTICE TO CONTRACTORS

Prior to Award, this questionnaire shall be completely filled out for the project upon which a bid is submitted.

A. FINANCIAL

1. Have you ever failed to complete a contract on account of insufficient resources? _____

2. Have you made sufficient arrangements to finance the work? _____

   If so, with whom and for what amount? _____

   If so, with what company? _____

B. EQUIPMENT

1. Set forth below the equipment which you have available for the work which you propose to do. This equipment should be listed in detail (General statements will not be accepted).

NO.	ITEMS	TYPE	SIZE/CAPACITY	PRESENT VALUE

2. Do you thoroughly understand that in case the contract is awarded to you, you may be required to use any or all of the equipment listed on the work covered by this contract? _____

3. Do you propose to purchase any equipment for use on this project should contract be awarded to you? If so, state type, quantity and approximate cost. _____

4. Do you propose to rent any equipment for this work? _____
   If so, state type, quantity, and reason for renting. _____

5. Have you made contracts or received firm offers for all necessary materials with the prices used in preparing your proposal? _____

6. Do you intend to plan to subcontract any of the work? _____
If so, what types or portions of the work. _____
_____
Approximate value $_____ Percent of total bid _____

C. EXPERIENCE

1. How many years has your organization been in business as a general contractor under your present business name? _____

2. How many years experience in construction work has your organization had:

a) as a General Contractor _____.
b) as a Subcontractor _____.

3. List previous contracts you have completed of a similar nature to this proposed contract:

a) _____
b) _____
c) _____
d) _____
e) _____

4. List projects which you currently have under contract or expect to have under contract during the life of this contract:

a) _____
b) _____
c) _____

Use additional sheets as necessary.

5. List your staff you plan to use on this project and the position they will fill for this project (include managerial and clerical personnel that will provide support services).

STAFF MEMBER **POSITION**

_____

_____

_____

_____

_____

Signature: _____ Title: _____

JOINT VENTURE

1. Joint Venture Agreement
2. A statement signed by authorized person of each party to the joint venture.
3. Each party to the joint venture shall comply with the requirements for corporations, partnerships or individuals, as applicable.

PARTNERSHIP

1. Partnership Agreement
2. Statement signed by all partners granting authority to the partner signing the Bid.

CORPORATIONS

1. Articles of Incorporation – **most recent.**
2. By-Laws – **most recent.**
3. Resolution of the Board of Directors granting the authority to the officer signing on behalf of the corporation.

X. State of Alaska Labor Rates

Laborers' & Mechanics' Minimum Rates of Pay

Effective May 1, 2019
Issue 38

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

ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT

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THE STATE of ALASKA
GOVERNOR MICHAEL J. DUNLEAVY

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

May 1, 2019

TO ALL CONTRACTING AGENCIES:

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

This pamphlet identifies current prevailing wage rates and resident hire classifications for public construction contracts (any construction projects awarded for the State of Alaska or its political subdivisions, such as local governments and certain non-profit organizations). Because these rates may change in a subsequent determination, please be sure you are using the appropriate rates. The rates published in this edition become effective May 1, 2019.

The prevailing wage rates contained in this pamphlet are applicable to public construction projects with a final bid date of May 11, 2019, or later. 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 go to: http://labor.state.ak.us/lss/pamp600.htm

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

Sincerely,

Dr. Tamika L. Ledbetter
Commissioner

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Table of Contents

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 current laws and regulations, please refer to the official codes.

Photo By: Sgt. Ian Leones. Courtesy of the United States Marine Corps. Safety Note: Potential safety issues include making sure the vehicle and equipment are secured from inadvertent movement while work is performed. Gloves and eye protection would help reduce the chances of injuries while performing this type of work.

EXCERPTS FROM ALASKA LAW

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.

EXCERPTS FROM ALASKA ADMINISTRATIVE CODE

*****Notice:** Regulations relating to board and lodging and per diem went into effect on November 25, 2018. The new regulations are excerpted here*******

8 AAC 30.051. Purpose. The purpose of 8 AAC 30.052 – 8 AAC 30.056 is to ensure that wages paid to laborers, mechanics, and field surveyors do not fall below the prevailing rate of pay.

8 AAC 30.052. Board and lodging; remote sites. (a) A contractor on a public construction project located 65 or more road miles from the international airport closest to the project area in either Fairbanks, Juneau, or Anchorage, or that is inaccessible by road in a two-wheel drive vehicle, shall provide adequate board and lodging to each laborer, mechanic, or field surveyor while the person is employed on the project. If commercial lodging facilities are not available, the contractor shall provide temporary lodging facilities. Lodging facilities must comply with all applicable state and federal laws. For a highway project, the location of the project is measured from the midpoint of the project.

(b) A contractor is not required to provide board and lodging:

(1) to a laborer, mechanic, or field surveyor who is a domiciled resident of the project area; or

(2) on a laborer, mechanic, or field surveyor's scheduled days off, when the person can reasonably travel between the project and the person's permanent residence; for the purposes of this paragraph, "scheduled day off" means a day in which a person does not perform work on-site, is not required to remain at or near the job location for the benefit of the contractor, and is informed of the day off at least seven days before the day off.

(c) Upon a contractor's written request, the commissioner may waive the requirements of (a) of this section where:

(1) the project is inaccessible by road in a two-wheel drive vehicle, but the laborer, mechanic, or field surveyor can reasonably travel between the project and the person's permanent residence within one hour; or

(2) a laborer, mechanic, or field surveyor is not a domiciled resident of the project area, but has established permanent residence, with the intent to remain indefinitely, within 65 road miles of the project, or for a highway project, the mid-point of the project.

8 AAC 30.054. Per diem instead of board and lodging. (a) A contractor may pay a laborer, mechanic, or field surveyor per diem instead of providing board and lodging, when the following conditions are met:

(1) the department determines that per diem instead of board and lodging is an established practice for the work classification; the department shall publish and periodically revise its determinations in the pamphlet *Laborers' and Mechanics' Minimum Rates of Pay*;

(2) the contractor pays each laborer, mechanic, or field surveyor the appropriate per diem rate as published and periodically revised in the pamphlet *Laborers' and Mechanics' Minimum Rates of Pay*; and

(3) the contractor pays the per diem to each laborer, mechanic, or field surveyor on the same day that wages are paid.

(b) A contractor may not pay per diem instead of board and lodging on a highway project located

(1) west of Livengood on the Elliot Highway, AK-2;

(2) on the Dalton Highway, AK-11;

(3) north of milepost 20 on the Taylor Highway, AK-5;

(4) east of Chicken on the Top of the World Highway; or

(5) south of Tetlin Junction to the Alaska-Canada border on the Alaska Highway, AK-2.

8 AAC 30.056. Alternative arrangement. Upon a contractor's written request, the commissioner may approve an alternative board and lodging or per diem arrangement, provided

(1) the arrangement does not reduce the laborer, mechanic, or field surveyor's wages below the prevailing wage rate; and

(2) the laborer, mechanic, or field surveyor voluntarily enters into and signs the written arrangement; a labor organization representing laborers, mechanics, or field surveyors may enter into the written agreement on their behalf.

8 AAC 30.900. General definitions (selected excerpts only):

In this chapter and in AS 36

(22) "domiciled resident" means a person living within 65 road miles of a public construction 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 public construction project;

(23) "employed on the project" means the time period from the date the laborer, mechanic, or field surveyor first reports on-site to the project through the final date the person reports on-site to the project.

ADDITIONAL INFORMATION

PER DIEM

Notice: New regulations relating to board and lodging and per diem went into effect on November 25, 2018. The regulations provide a comprehensive set of requirements for the provision of board and lodging or per diem for workers on remote projects. Please refer to Alaska Administrative Code 8 AAC Chapter 30 and read the chapter carefully.

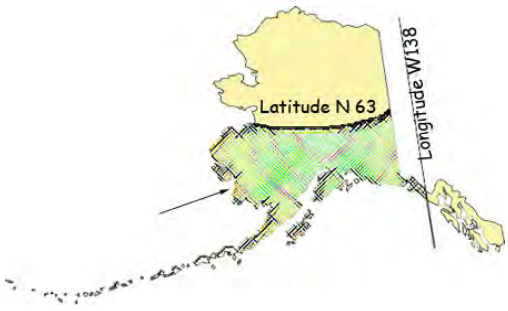
The Alaska Department of Labor and Workforce Development has determined that per diem is an established work practice for certain work classifications. These classifications are indicated throughout the Pamphlet by an asterisk (*) under the classification title. If all of the conditions of 8 AAC 30.054 are met, an employer may pay workers in these classifications per diem instead of providing board and lodging on a remote project.

Per Diem Rate: As of May 1st, 2019, the minimum per diem rate is $100.00 per day, or part thereof, the worker is employed on the project. In the event that a contractor provides lodging facilities, but no meals, the department will accept a payment of $48 per day for meals to meet the per diem requirements.

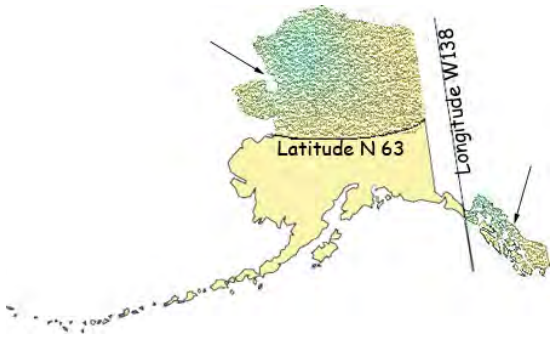
LABORER CLASSIFICATION CLARIFICATION

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:

S1201-
S1206



N1201-
N1206



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 and Safety Division
Wage and Hour Administration
P.O. Box 111149
Juneau, AK 99811-1149
-or-
Email: statewide.wagehour@alaska.gov

DEPARTMENT OF LABOR and WORKFORCE DEVELOPMENT

ALASKA EMPLOYMENT PREFERENCE INFORMATION

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

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

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

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

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

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

Here is an example to apply the 90 percent requirement to four boilermaker workers. Multiply four workers by 90% and drop the fraction (.90 X 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 and Safety Division
Wage and Hour Administration
Web site: http://labor.state.ak.us/lss/pamp600.htm

Anchorage	Juneau	Fairbanks
1251 Muldoon Road, Suite 113 Anchorage, Alaska 99504-2098 Phone: (907) 269-4900 Email: statewide.wagehour@alaska.gov	PO Box 111149 Juneau, Alaska 99811 Phone: (907) 465-4842 Email: statewide.wagehour@alaska.gov	Regional State Office Building 675 7th Ave., Station J-1 Fairbanks, Alaska 99701-4593 Phone: (907) 451-2886 Email: statewide.wagehour@alaska.gov

LABOR STANDARDS AND SAFETY NOTICE REQUESTS

If you would like to receive Wage and Hour Administration or Mechanical Inspection **regulation notices** or **publications information**, they are available via electronic mail, by signing up in the GovDelivery System, https://public.govdelivery.com/accounts/AKDOL/subscriber/new and selecting topics *LSS – Wage and Hour – Forms and Publications*, *LSS – Mechanical Inspection Regulations*, or *LSS – Wage and Hour Regulations*.

Publications are also available online at http://labor.alaska.gov/lss/home.htm

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
Tim Banach, Individual	February 23, 2021
Boulder Creek Electric	February 23, 2021

Laborers' & Mechanics' Minimum Rates of Pay

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Boilermakers	*See per diem note on last page							
						VAC	**SAF**	
A0101	Boilermaker (journeyman)	46.13	8.57	16.42	1.65	3.50	0.34	76.61
Bricklayers & Blocklayers	*See per diem note on last page							
						L&M		
A0201	Blocklayer	40.81	9.83	8.50	0.55	0.15	0.74	60.58
	Bricklayer							
	Marble or Stone Mason							
	Refractory Worker (Firebrick, Plastic, Castable, and Gunite Refractory Applications)							
	Terrazzo Worker							
	Tile Setter							
						L&M		
A0202	Tuck Pointer Caulker	40.81	9.83	8.50	0.55	0.15	0.74	60.58
	Cleaner (PCC)							
						L&M		
A0203	Marble & Tile Finisher	34.79	9.83	8.50	0.55	0.15	0.74	54.56
	Terrazzo Finisher							
						L&M		
A0204	Torginal Applicator	38.83	9.83	8.50	0.55	0.15	0.74	58.60
Carpenters, Statewide	*See per diem note on last page							
						L&M	**SAF**	
A0301	Carpenter (journeyman)	38.34	10.08	14.63	0.95	0.10	0.10	64.20
	Lather/Drywall/Acoustical							
Cement Masons, Region I (North of N63 latitude)	*See per diem note on last page							
						L&M		
N0401	Group I, including:	38.13	8.70	11.80	1.18	0.10		59.91
	Application of Sealing Compound							
	Application of Underlayment							
	Building, General							
	Cement Mason (journeyman)							
	Concrete							

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

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Cement Masons, Region I (North of N63 latitude)							
	*See per diem note on last page						
						L&M	
N0401	Group I, including:	38.13	8.70	11.80	1.18	0.10	59.91
	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						
						L&M	
N0402	Group II, including:	38.13	8.70	11.80	1.18	0.10	59.91
	Form Setter						
						L&M	
N0403	Group III, including:	38.13	8.70	11.80	1.18	0.10	59.91
	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						
						L&M	
N0404	Group IV, including:	38.13	8.70	11.80	1.18	0.10	59.91
	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						
						L&M	
N0405	Group V, including:	38.13	8.70	11.80	1.18	0.10	59.91
	Plasterer						
Cement Masons, Region II (South of N63 latitude)							
	*See per diem note on last page						
						L&M	
S0401	Group I, including:	37.88	8.70	11.80	1.18	0.10	59.66

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
Cement Masons, Region II (South of N63 latitude)							
	*See per diem note on last page						
						L&M	
S0401	Group I, including:	37.88	8.70	11.80	1.18	0.10	59.66
	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						
						L&M	
S0402	Group II, including:	37.88	8.70	11.80	1.18	0.10	59.66
	Form Setter						
						L&M	
S0403	Group III, including:	37.88	8.70	11.80	1.18	0.10	59.66
	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						
						L&M	
S0404	Group IV, including:	37.88	8.70	11.80	1.18	0.10	59.66
	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						
						L&M	
S0405	Group V, including:	37.88	8.70	11.80	1.18	0.10	59.66
	Plasterer						

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Culinary Workers								
A0501	Baker/Cook	28.37	7.40	6.97		**LEG** 0.07		42.81
A0503	General Helper	25.05	7.40	6.97		**LEG** 0.07		39.49
	Housekeeper Janitor Kitchen Helper							
A0504	Head Cook	28.97	7.40	6.97		**LEG** 0.07		43.41
A0505	Head Housekeeper	25.45	7.40	6.97		**LEG** 0.07		39.89
	Head Kitchen Help							
Dredgemen *See per diem note on last page								
A0601	Assistant Engineer	39.76	10.00	12.50	1.00	**L&M** 0.10	0.05	63.41
	Craneman Electrical Generator Operator (primary pump/power barge/dredge) Engineer Welder							
A0602	Assistant Mate (deckhand)	38.60	10.00	12.50	1.00	**L&M** 0.10	0.05	62.25
A0603	Fireman	39.04	10.00	12.50	1.00	**L&M** 0.10	0.05	62.69
A0605	Leverman Clamshell	42.29	10.00	12.50	1.00	**L&M** 0.10	0.05	65.94
A0606	Leverman Hydraulic	40.53	10.00	12.50	1.00	**L&M** 0.10	0.05	64.18
A0607	Mate & Boatman	39.76	10.00	12.50	1.00	**L&M** 0.10	0.05	63.41
A0608	Oiler (dredge)	39.04	10.00	12.50	1.00	**L&M** 0.10	0.05	62.69
Electricians *See per diem note on last page								
A0701	Inside Cable Splicer	40.03	13.64	13.84	0.95	**L&M** 0.20	**LEG** 0.15	68.81

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
Electricians								
	*See per diem note on last page							
						L&M	**LEG**	
A0702	Inside Journeyman Wireman, including:	39.70	13.64	14.08	0.95	0.20	0.15	68.72
	Technicians (including use of drones in electrical construction)							
						L&M	**LEG**	
A0703	Power Cable Splicer	56.05	13.64	18.87	0.95	0.20	0.15	89.86
						L&M	**LEG**	
A0704	Tele Com Cable Splicer	49.28	13.64	16.13	0.95	0.20	0.15	80.35
						L&M	**LEG**	
A0705	Power Journeyman Lineman, including:	54.30	13.64	18.82	0.95	0.20	0.15	88.06
	Power Equipment Operator Technician (including use of drones in electrical construction)							
						L&M	**LEG**	
A0706	Tele Com Journeyman Lineman, including:	47.53	13.64	16.08	0.95	0.20	0.15	78.55
	Technician (including use of drones in telecommunications construction) Tele Com Equipment Operator							
						L&M	**LEG**	
A0707	Straight Line Installer - Repairman	47.53	13.64	16.08	0.95	0.20	0.15	78.55
						L&M	**LEG**	
A0708	Powderman	52.30	13.64	18.76	0.95	0.20	0.15	86.00
						L&M	**LEG**	
A0710	Material Handler	26.57	13.07	4.80	0.15	0.15	0.15	44.89
						L&M	**LEG**	
A0712	Tree Trimmer Groundman	27.54	13.64	12.23	0.15	0.15	0.15	53.86
						L&M	**LEG**	
A0713	Journeyman Tree Trimmer	36.21	13.64	12.49	0.15	0.15	0.15	62.79
						L&M	**LEG**	
A0714	Vegetation Control Sprayer	39.66	13.64	12.59	0.15	0.15	0.15	66.34
						L&M	**LEG**	
A0715	Inside Journeyman Communications CO/PBX	38.28	13.64	13.79	0.95	0.20	0.15	67.01
Elevator Workers								
	*See per diem note on last page							
						L&M	**VAC**	
A0802	Elevator Constructor	40.06	15.58	17.51	0.62	0.42	4.44	78.63
						L&M	**VAC**	
A0803	Elevator Constructor Mechanic	57.23	15.58	17.51	0.62	0.42	6.35	97.71

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
Heat & Frost Insulators/Asbestos Workers								
	*See per diem note on last page							
						SAF		
A0902	Asbestos Abatement-Mechanical Systems	38.68	9.24	11.01	1.20	0.12		60.25
						SAF		
A0903	Asbestos Abatement/General Demolition All Systems	38.68	9.24	11.01	1.20	0.12		60.25
						SAF		
A0904	Insulator, Group II	38.68	9.24	11.01	1.20	0.12		60.25
						SAF		
A0905	Fire Stop	38.68	9.24	11.01	1.20	0.12		60.25
IronWorkers								
	*See per diem note on last page							
						L&M	**IAF**	
A1101	Ironworkers, including:	37.90	8.73	21.18	1.57	0.20	0.36	69.94
	Bender Operators Bridge & Structural Machinery Mover Ornamental Reinforcing Rigger Sheeter Signalman Stage Rigger Toxic Haz-Mat Work Welder							
						L&M	**IAF**	
A1102	Helicopter	38.90	8.73	21.18	1.57	0.20	0.36	70.94
	Tower (energy producing windmill type towers to include nacelle and blades)							
						L&M	**IAF**	
A1103	Fence/Barrier Installer	34.40	8.73	20.93	1.47	0.20	0.36	66.09
	Guard Rail Installer							
						L&M	**IAF**	
A1104	Guard Rail Layout Man	35.14	8.73	20.93	1.47	0.20	0.36	66.83
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)								
	*See per diem note on last page							
						L&M	**LEG**	
N1201	Group I, including:	30.71	8.70	17.31	1.30	0.20	0.20	58.42
	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
						L&M	LEG	

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

*See per diem note on last page

N1201	Group I, including:	30.71	8.70	17.31	1.30	0.20	0.20	58.42

Brush Cutter
Camp Maintenance Laborer
Carpenter Tender or Helper
Choke Setter, Hook Tender, Rigger, Signalman
Concrete Labor (curb & gutter, chute handler, curing, grouting, 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

N1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42

Burning & Cutting Torch

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)								
	*See per diem note on last page							
N1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42
	Cement or Lime Dumper or Handler (sack or bulk)							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Choker Splicer							
	Chucktender (wagon, air-track & hydraulic drills)							
	Concrete Laborer (power buggy, concrete saws, pumpcrete nozzleman, vibratorman)							
	Culvert Pipe Laborer							
	Cured Inplace Pipelayer							
	Environmental Laborer (asbestos, marine work)							
	Floor Preparation, Core Drilling							
	Foam Gun or Foam Machine Operator							
	Green Cutter (dam work)							
	Gunite Operator							
	Hod Carrier							
	Jackhammer/Chipping Gun or Pavement Breaker							
	Laser Instrument Operator							
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work)							
	Mason Tender & Mud Mixer (sewer work)							
	Pilot Car							
	Pipelayer Helper							
	Plasterer, Bricklayer & Cement Finisher Tender							
	Powderman Helper							
	Power Saw Operator							
	Railroad Switch Layout Laborer							
	Sandblaster							
	Scaffold Building & Erecting							
	Sewer Caulker							
	Sewer Plant Maintenance Man							
	Thermal Plastic Applicator							
	Timber Faller, Chainsaw Operator, Filer							
	Timberman							
						L&M	LEG	
N1203	Group III, including:	32.61	8.70	17.31	1.30	0.20	0.20	60.32
	Bit Grinder							
	Camera/Tool/Video Operator							
	Guardrail Machine Operator							
	High Rigger & Tree Topper							
	High Scaler							
	Multiplate							

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page								
N1203	Group III, including:	32.61	8.70	17.31	1.30	0.20	0.20	60.32
	Plastic Welding Slurry Seal Squeegee Man Traffic Control Supervisor Welding Certified (in connection with laborer's work)							
						L&M	LEG	
N1204	Group IIIA	35.89	8.70	17.31	1.30	0.20	0.20	63.60
	Asphalt Raker, Asphalt Belly Dump Lay Down Drill Doctor (in the field) Driller (including, but not limited to, wagon drills, air-track drills, hydraulic drills) Pioneer Drilling & Drilling Off Tugger (all type drills) Pipelayers Powderman (Employee Possessor) Storm Water Pollution Protection Plan Specialist (SWPPP Specialist) Traffic Control Supervisor, DOT Qualified							
						L&M	LEG	
N1205	Group IV	20.28	8.70	17.31	1.30	0.20	0.20	47.99
	Final Building Cleanup Permanent Yard Worker							
						L&M	LEG	
N1206	Group IIIB	39.68	5.99	17.31	1.30	0.20	0.20	64.68
	Federal Powderman (Responsible Person in Charge) Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones) Stake Hopper							
Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
						L&M	LEG	
S1201	Group I, including:	30.71	8.70	17.31	1.30	0.20	0.20	58.42
	Asphalt Worker (shovelman, plant crew) Brush Cutter Camp Maintenance Laborer Carpenter Tender or Helper Choke Setter, Hook Tender, Rigger, Signalman Concrete Labor (curb & gutter, chute handler, curing, grouting, screeding) Crusher Plant Laborer Demolition Laborer Ditch Digger							

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	

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

*See per diem note on last page

S1201	Group I, including:	30.71	8.70	17.31	1.30	0.20	0.20	58.42

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

S1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42

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

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	

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

*See per diem note on last page

						L&M	LEG	
S1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42

Environmental Laborer (asbestos, marine work)
Floor Preparation, Core Drilling
Foam Gun or Foam Machine Operator
Green Cutter (dam work)
Gunite Operator
Hod Carrier
Jackhammer/Chipping Gun or Pavement Breaker
Laser Instrument Operator
Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work)
Mason Tender & Mud Mixer (sewer work)
Pilot Car
Pipelayer Helper
Plasterer, Bricklayer & Cement Finisher Tender
Powderman Helper
Power Saw Operator
Railroad Switch Layout Laborer
Sandblaster
Scaffold Building & Erecting
Sewer Caulker
Sewer Plant Maintenance Man
Thermal Plastic Applicator
Timber Faller, Chainsaw Operator, Filer
Timberman

						L&M	LEG	
S1203	Group III, including:	32.61	8.70	17.31	1.30	0.20	0.20	60.32

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	
S1204	Group IIIA	35.89	8.70	17.31	1.30	0.20	0.20	63.60

Asphalt Raker, Asphalt Belly Dump Lay Down
Drill Doctor (in the field)

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
						L&M	**LEG**	
S1204	Group IIIA	35.89	8.70	17.31	1.30	0.20	0.20	63.60
	Driller (including, but not limited to, wagon drills, air-track drills, hydraulic drills) Pioneer Drilling & Drilling Off Tugger (all type drills) Pipelayers Powderman (Employee Possessor) Storm Water Pollution Protection Plan Specialist (SWPPP Specialist) Traffic Control Supervisor, DOT Qualified							
						L&M	**LEG**	
S1205	Group IV	20.28	8.70	17.31	1.30	0.20	0.20	47.99
	Final Building Cleanup Permanent Yard Worker							
						L&M	**LEG**	
S1206	Group IIIB	39.68	5.99	17.31	1.30	0.20	0.20	64.68
	Federal Powderman (Responsible Person in Charge) Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones) Stake Hopper							
Millwrights *See per diem note on last page								
						L&M		
A1251	Millwright (journeyman)	36.99	10.08	12.28	1.00	0.40	0.05	60.80
						L&M		
A1252	Millwright Welder	37.99	10.08	12.28	1.00	0.40	0.05	61.80
Painters, Region I (North of N63 latitude) *See per diem note on last page								
						L&M		
N1301	Group I, including:	32.29	8.21	12.70	1.08	0.07		54.35
	Brush General Painter Hand Taping Hazardous Material Handler Lead-Based Paint Abatement Roll							
						L&M		
N1302	Group II, including:	32.81	8.21	12.70	1.08	0.07		54.87
	Bridge Painter							

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

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Painters, Region I (North of N63 latitude) *See per diem note on last page							
						L&M	
N1302	Group II, including:	32.81	8.21	12.70	1.08	0.07	54.87
	Epoxy Applicator General Drywall Finisher Hand/Spray Texturing Industrial Coatings Specialist Machine/Automatic Taping Pot Tender Sandblasting Specialty Painter Spray Structural Steel Painter Wallpaper/Vinyl Hanger						
N1304	Group IV, including:	39.78	8.21	15.23	1.05	0.05	64.32
	Glazier Storefront/Automatic Door Mechanic						
N1305	Group V, including:	29.13	8.21	5.02	0.83	0.07	43.26
	Carpet Installer Floor Coverer Heat Weld/Cove Base Linoleum/Soft Tile Installer						
Painters, Region II (South of N63 latitude) *See per diem note on last page							
						L&M	
S1301	Group I, including :	30.13	8.21	12.85	1.08	0.07	52.34
	Brush General Painter Hand Taping Hazardous Material Handler Lead-Based Paint Abatement Roll Spray						
						L&M	
S1302	Group II, including :	31.38	8.21	12.85	1.08	0.07	53.59
	General Drywall Finisher Hand/Spray Texturing Machine/Automatic Taping Wallpaper/Vinyl Hanger						

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

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Painters, Region II (South of N63 latitude)							
	*See per diem note on last page						
						L&M	
S1303	Group III, including :	31.48	8.21	12.85	1.08	0.07	53.69
	Bridge Painter						
	Epoxy Applicator						
	Industrial Coatings Specialist						
	Pot Tender						
	Sandblasting						
	Specialty Painter						
	Structural Steel Painter						
						L&M	
S1304	Group IV, including:	39.99	8.21	14.27	1.08	0.07	63.62
	Glazier						
	Storefront/Automatic Door Mechanic						
						L&M	
S1305	Group V, including:	29.13	8.21	5.02	0.83	0.07	43.26
	Carpet Installer						
	Floor Coverer						
	Heat Weld/Cove Base						
	Linoleum/Soft Tile Installer						
Piledrivers							
	*See per diem note on last page						
						L&M	**IAF**
A1401	Piledriver	38.34	10.08	14.63	0.95	0.10	0.10 64.20
	Assistant Dive Tender						
	Carpenter/Piledriver						
	Rigger						
	Sheet Stabber						
	Skiff Operator						
						L&M	**IAF**
A1402	Piledriver-Welder/Toxic Worker	39.34	10.08	14.63	0.95	0.10	0.10 65.20
						L&M	**IAF**
A1403	Remotely Operated Vehicle Pilot/Technician	42.65	10.08	14.63	0.95	0.10	0.10 68.51
	Single Atmosphere Suit, Bell or Submersible Pilot						
						L&M	**IAF**
A1404	Diver (working) **See note on last page	82.45	10.08	14.63	0.95	0.10	0.10 108.31
						L&M	**IAF**
A1405	Diver (standby) **See note on last page	42.65	10.08	14.63	0.95	0.10	0.10 68.51

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
Piledrivers								
	*See per diem note on last page							
						L&M	**IAF**	
A1406	Dive Tender **See note on last page	41.65	10.08	14.63	0.95	0.10	0.10	67.51
						L&M	**IAF**	
A1407	Welder (American Welding Society, Certified Welding Inspector)	43.90	10.08	14.63	0.95	0.10	0.10	69.76
Plumbers, Region I (North of N63 latitude)								
	*See per diem note on last page							
						L&M	**S&L**	
N1501	Journeyman Pipefitter	41.46	8.25	16.90	1.25	0.65		68.51
	Plumber							
	Welder							
Plumbers, Region II (South of N63 latitude)								
	*See per diem note on last page							
						L&M		
S1501	Journeyman Pipefitter	39.00	10.33	15.02	1.35	0.20		65.90
	Plumber							
	Welder							
Plumbers, Region IIA (1st Judicial District)								
	*See per diem note on last page							
						L&M		
X1501	Journeyman Pipefitter	38.02	13.37	11.25	2.50	0.24		65.38
	Plumber							
	Welder							
Power Equipment Operators								
	*See per diem note on last page							
						L&M		
A1601	Group I, including:	40.53	10.00	12.50	1.00	0.10	0.05	64.18
	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							

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
	Power Equipment Operators *See per diem note on last page							
						L&M		
A1601	Group I, including:	40.53	10.00	12.50	1.00	0.10	0.05	64.18
	Concrete Hydro Blaster							
	Cranes (45 tons & under or 150 feet of boom & under (including jib & attachments))							
	(a) Hydralifts or Transporters, (all track or truck type)							
	(b) Derricks							
	(c) Overhead							
	Crushers							
	Deck Winches, Double Drum							
	Ditching or Trenching Machine (16 inch or over)							
	Drag Scraper, Yarder, and similar types							
	Drilling Machines, Core, Cable, Rotary and Exploration							
	Finishing Machine Operator, Concrete Paving, Laser Screed, Sidewalk, Curb & Gutter Machine							
	Helicopters							
	Hover Craft, Flex Craft, Loadmaster, Air Cushion, All-Terrain Vehicle, Rollagon, Bargecable, Nodwell, & Snow Cat							
	Hydro Ax, Feller Buncher & similar							
	Hydro Excavation (Vac-Truck and Similar)							
	Licensed Line & Grade							
	Loaders (2 1/2 yards through 5 yards, including all attachments):							
	(a) Forklifts (with telescopic boom & swing attachment)							
	(b) Front End & Overhead, (2-1/2 yards through 5 yards)							
	(c) Loaders, (with forks or pipe clamp)							
	(d) Loaders, (elevating belt type, Euclid & similar types)							
	Material Transfer Vehicle (Elevating Grader, Pickup Machine, and similar types)							
	Mechanic, Welder, Bodyman, Electrical, Camp & Maintenance Engineer							
	Micro Tunneling Machine							
	Mixers: Mobile type with hoist combination							
	Motor Patrol Grader							
	Mucking Machine: Mole, Tunnel Drill, Horizontal/Directional Drill Operator and/or Shield							
	Off-Road Hauler (including Articulating and Haul Trucks)							
	Operator on Dredges							
	Piledriver Engineer, L.B. Foster, Puller or similar paving breaker							
	Plant Operator (Asphalt & Concrete)							
	Power Plant, Turbine Operator 200 k.w & over (power plants or combination of power units over 300 k.w.)							
	Remote Controlled Equipment							
	Scraper (through 40 yards)							
	Service Oiler/Service Engineer							

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Power Equipment Operators *See per diem note on last page								
						L&M		
A1601	Group I, including:	40.53	10.00	12.50	1.00	0.10	0.05	64.18
	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							
	Wate Kote Machine							
						L&M		
A1602	Group IA, including:	42.29	10.00	12.50	1.00	0.10	0.05	65.94
	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							
						L&M		
A1603	Group II, including:	39.76	10.00	12.50	1.00	0.10	0.05	63.41
	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							

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Power Equipment Operators *See per diem note on last page								
						L&M		
A1603	Group II, including:	39.76	10.00	12.50	1.00	0.10	0.05	63.41
	Sideboom (cradling rock drill, regardless of size)							
	Skidder							
	Trenching Machines (under 16 inches)							
	Water/Waste Water Treatment Operator							
						L&M		
A1604	Group III, including:	39.04	10.00	12.50	1.00	0.10	0.05	62.69
	"A" Frame Trucks, Deck Winches							
	Bombardier (tack or tow rig)							
	Boring Machine							
	Brooms, Power (sweeper, elevator, vacuum, or similar)							
	Bump Cutter							
	Compressor							
	Farm Tractor							
	Forklift, Industrial Type							
	Gin Truck or Winch Truck (with poles when used for hoisting)							
	Hoists, Air Tuggers, Elevators							
	Loaders:							
	(a) Elevating-Athey, Barber Greene & similar types							
	(b) Forklifts or Lumber Carrier (on construction job sites)							
	(c) Forklifts, (with tower)							
	(d) Overhead & Front End, (under 2-l/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							
						L&M		
A1605	Group IV, including:	32.83	10.00	12.50	1.00	0.10	0.05	56.48
	Crane Assistant Engineer/Rig Oiler							
	Drill Helper							

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Power Equipment Operators								
	*See per diem note on last page							
						L&M		
A1605	Group IV, including:	32.83	10.00	12.50	1.00	0.10	0.05	56.48
	Parts & Equipment Coordinator							
	Spotter							
	Steam Cleaner							
	Swamper (on trenching machines or shovel type equipment)							
Roofers								
	*See per diem note on last page							
						L&M		
A1701	Roofer & Waterproofer	44.62	11.75	3.41	0.81	0.10	0.03	60.72
						L&M		
A1702	Roofer Material Handler	31.23	11.75	3.41	0.81	0.10	0.03	47.33
Sheet Metal Workers, Region I (North of N63 latitude)								
	*See per diem note on last page							
						L&M		
N1801	Sheet Metal Journeyman	47.74	10.80	13.11	1.45	0.12		73.22
	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)								
	*See per diem note on last page							

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Sheet Metal Workers, Region II (South of N63 latitude) *See per diem note on last page							
S1801	Sheet Metal Journeyman	42.70	10.80	13.49	1.68	L&M 0.43	69.10
	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						
Sprinkler Fitters *See per diem note on last page							
A1901	Sprinkler Fitter	47.25	10.02	15.95	0.52	L&M 0.25	73.99
Surveyors *See per diem note on last page							
A2001	Chief of Parties	43.16	10.83	12.14	1.15	L&M 0.10	67.38
A2002	Party Chief	41.57	10.83	12.14	1.15	L&M 0.10	65.79
A2003	Line & Grade Technician/Office Technician/GPS, Drones	40.97	10.83	12.14	1.15	L&M 0.10	65.19
A2004	Associate Party Chief (including Instrument Person & Head Chain Person)/Stake Hop/Grademan	38.85	10.83	12.14	1.15	L&M 0.10	63.07
A2006	Chain Person (for crews with more than 2 people)	34.51	10.83	12.14	1.15	L&M 0.10	58.73

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Truck Drivers							
	*See per diem note on last page						
						L&M	
A2101	Group I, including:	39.94	10.83	12.14	1.15	0.10	64.16
	Air/Sea Traffic Controllers						
	Ambulance/Fire Truck Driver (EMT certified)						
	Boat Coxswain						
	Captains & Pilots (air & water)						
	Deltas, Commanders, Rollagons, & similar equipment (when pulling sleds, trailers or similar equipment)						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 40 yards up to & including 60 yards						
	Helicopter Transporter						
	Liquid Vac Truck/Super Vac Truck						
	Lowboys (including attached trailers & jeeps up to & including 8 axles)						
	Material Coordinator or Purchasing Agent						
	Ready-mix (over 12 yards up to & including 15 yards) (over 15 yards to be negotiated)						
	Semi with Double Box Mixer						
	Tireman, Heavy Duty/Fueler						
	Water Wagon (250 Bbls and above)						
						L&M	
A2102	Group 1A including:	41.21	10.83	12.14	1.15	0.10	65.43
	Dump Trucks (including rockbuggy, side dump, belly dump & trucks with pups) over 60 yards up to & including 100 yards (over 100 yards to be negotiated)						
	Jeeps (driver under load)						
	Lowboys, including tractor attached trailers & jeeps, 9 axles, up to & including 12 axles (over 12 axles or 150 tons to be negotiated)						
						L&M	
A2103	Group II, including:	38.68	10.83	12.14	1.15	0.10	62.90
	All Deltas, Commanders, Rollagons, & similar equipment						
	Batch Trucks (8 yards & up)						
	Batch Trucks (up to & including 7 yards)						
	Boom Truck/Knuckle Truck (over 5 tons)						
	Cacasco Truck/Heat Stress Truck						
	Construction and Material Safety Technician						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 20 yards up to & including 40 yards						
	Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating over 5 tons)						
	Mechanics						
	Oil Distributor Driver						
	Partsman						
	Ready-mix (up to & including 12 yards)						

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Truck Drivers							
	*See per diem note on last page						
						L&M	
A2103	Group II, including:	38.68	10.83	12.14	1.15	0.10	62.90
	Stringing Truck						
	Turn-O-Wagon or DW-10 (not self loading)						
						L&M	
A2104	Group III, including:	37.86	10.83	12.14	1.15	0.10	62.08
	Boom Truck/Knuckle Truck (up to & including 5 tons)						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 10 yards up to & including 20 yards						
	Expeditor (electrical & pipefitting materials)						
	Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating 5 tons & under)						
	Greaser - Shop						
	Semi or Truck & Trailer						
	Thermal Plastic Layout Technician						
	Traffic Control Technician						
	Trucks/Jeeps (push or pull)						
						L&M	
A2105	Group IV, including:	37.28	10.83	12.14	1.15	0.10	61.50
	Air Cushion or similar type vehicle						
	All Terrain Vehicle						
	Buggymobile						
	Bull Lift & Fork Lift, Fork Lift with Power Boom & Swing Attachment (over 5 tons)						
	Bus Operator (over 30 passengers)						
	Cement Spreader, Dry						
	Combination Truck-Fuel & Grease						
	Compactor (when pulled by rubber tired equipment)						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) up to & including 10 yards						
	Dumpster						
	Expeditor (general)						
	Fire Truck/Ambulance Driver						
	Flat Beds, Dual Rear Axle						
	Foam Distributor Truck Dual Axle						
	Front End Loader with Fork						
	Grease Truck						
	Hydro Seeder, Dual Axle						
	Hyster Operators (handling bulk aggregate)						
	Loadmaster (air & water operations)						
	Lumber Carrier						
	Ready-mix, (up to & including 7 yards)						

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Truck Drivers							
	*See per diem note on last page						
						L&M	
A2105	Group IV, including:	37.28	10.83	12.14	1.15	0.10	61.50
	Rigger (air/water/oilfield)						
	Tireman, Light Duty						
	Track Truck Equipment						
	Truck Vacuum Sweeper						
	Warehouseperson						
	Water Truck (Below 250 Bbls)						
	Water Truck (straight)						
	Water Wagon, Semi						
						L&M	
A2106	Group V, including:	36.52	10.83	12.14	1.15	0.10	60.74
	Buffer Truck						
	Bull Lifts & Fork Lifts, Fork Lifts with Power Boom & Swing Attachments (up to & including 5 tons)						
	Bus Operator (up to 30 passengers)						
	Farm Type Rubber Tired Tractor (when material handling or pulling wagons on a construction project)						
	Flat Beds, Single Rear Axle						
	Foam Distributor Truck Single Axle						
	Fuel Handler (station/bulk attendant)						
	Gear/Supply Truck						
	Gravel Spreader Box Operator on Truck						
	Hydro Seeders, Single axle						
	Pickups (pilot cars & all light-duty vehicles)						
	Rigger/Swamper						
	Tack Truck						
	Team Drivers (horses, mules, & similar equipment)						
Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)							
	*See per diem note on last page						
						L&M	**LEG**
N2201	Group I, including:	33.78	8.70	17.31	1.30	0.20	0.20	61.49
	Brakeman						
	Mucker						
	Nipper						
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)						
	Topman & Bull Gang						
	Tunnel Track Laborer						
						L&M	**LEG**
N2202	Group II, including:	34.88	8.70	17.31	1.30	0.20	0.20	62.59

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
						L&M	LEG	
Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page								
N2202	Group II, including:	34.88	8.70	17.31	1.30	0.20	0.20	62.59
	Burning & Cutting Torch Certified Erosion Sediment Control Lead (CESCL Laborer) Concrete Laborer Floor Preparation, Core Drilling Jackhammer/Chipping Gun or Pavement Breaker Laser Instrument Operator Nozzlemen, Pumpcrete or Shotcrete Pipelayer Helper							
						L&M	LEG	
N2203	Group III, including:	35.87	8.70	17.31	1.30	0.20	0.20	63.58
	Miner Retimberman							
						L&M	LEG	
N2204	Group IIIA, including:	39.48	8.70	17.31	1.30	0.20	0.20	67.19
	Asphalt Raker, Asphalt Belly Dump Lay Down Drill Doctor (in the field) Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills) Pioneer Drilling & Drilling Off Tugger (all type drills) Pipelayer Powderman (Employee Possessor) Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)							
						L&M	LEG	
N2206	Group IIIB, including:	43.65	5.99	17.31	1.30	0.20	0.20	68.65
	Federal Powderman (Responsible Person in Charge) Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones) Stake Hopper							
Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
						L&M	LEG	
S2201	Group I, including:	33.78	8.70	17.31	1.30	0.20	0.20	61.49
	Brakeman Mucker Nipper Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer) Topman & Bull Gang							

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
	Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page							
						L&M	**LEG**	
S2201	Group I, including:	33.78	8.70	17.31	1.30	0.20	0.20	61.49
	Tunnel Track Laborer							
						L&M	**LEG**	
S2202	Group II, including:	34.88	8.70	17.31	1.30	0.20	0.20	62.59
	Burning & Cutting Torch							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Concrete Laborer							
	Floor Preparation, Core Drilling							
	Jackhammer/Chipping Gun or Pavement Breaker							
	Laser Instrument Operator							
	Nozzlemen, Pumpcrete or Shotcrete							
	Pipelayer Helper							
						L&M	**LEG**	
S2203	Group III, including:	35.87	8.70	17.31	1.30	0.20	0.20	63.58
	Miner							
	Retimberman							
						L&M	**LEG**	
S2204	Group IIIA, including:	39.48	8.70	17.31	1.30	0.20	0.20	67.19
	Asphalt Raker, Asphalt Belly Dump Lay Down							
	Drill Doctor (in the field)							
	Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)							
	Pioneer Drilling & Drilling Off Tugger (all type drills)							
	Pipelayer							
	Powderman (Employee Possessor)							
	Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)							
						L&M	**LEG**	
S2206	Group IIIB, including:	43.65	5.99	17.31	1.30	0.20	0.20	68.65
	Federal Powderman (Responsible Person in Charge)							
	Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)							
	Stake Hopper							
	Tunnel Workers, Power Equipment Operators *See per diem note on last page							
						L&M		
A2207	Group I	44.58	10.00	12.50	1.00	0.10	0.05	68.23
						L&M		
A2208	Group IA	46.52	10.00	12.50	1.00	0.10	0.05	70.17

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
Tunnel Workers, Power Equipment Operators *See per diem note on last page								
A2209	Group II	43.74	10.00	12.50	1.00	**L&M** 0.10	0.05	67.39
A2210	Group III	42.94	10.00	12.50	1.00	**L&M** 0.10	0.05	66.59
A2211	Group IV	36.11	10.00	12.50	1.00	**L&M** 0.10	0.05	59.76

*** Per diem is an established practice for this classification. This means that per diem is an allowable alternative to board and lodging if all criteria are met. See 8 AAC 30.051-08 AAC 30.056, and the per diem information on page vii of this Pamphlet.**

**** 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.**