

**PORT OF TACOMA
TACOMA, WASHINGTON
BUILDING 326 STOREFRONT WINDOW
REPLACEMENT, PARTITION BRACING AND
ISOLATED SIDING PAINTING**

PROJECT NO. 101532.01

CONTRACT NO. 071543

**Thais Howard, PE
Director, Engineering**



**Brett Ozolin, PE
Project Manager**

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The undersigned Engineer of Record hereby certifies that the Technical Specifications for the following portions of this project were written by me, or under my direct supervision, and that I am duly registered under the laws of the State of Washington, and hereby affix my Professional Seal and signature.

Those Sections prepared under my direct supervision and being certified by my seal and signature below are as follows:

<u>SEAL & SIGNATURE</u>	<u>SECTION(S)</u>
	02 07 00 - Selective Demolition 06 10 00 - Miscellaneous Carpentry 07 25 00 - Weather Barriers 07 62 00 - Sheet Metal Flashing and Trim 07 92 00 - Joint Sealants 08 32 13 - Sliding Aluminum - Framed Glass Door 08 40 00 - Aluminum Entrances and Storefronts 08 71 10 - Door Hardware 09 22 16 - Non-structural Metal Framing 09 51 00 - Acoustical Ceilings 09 91 00 - Painting
 Expires 01 December 2023	02 82 00 - Asebestos Abatement

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PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

- 00 01 01 - Project Title Page
- 00 01 07 - Seals Page
- 00 01 10 - Table of Contents
- 00 01 15 - List of Drawing Sheets
- 00 11 13 - Advertisement for Bids
- 00 21 00 - Instructions to Bidders
- 00 26 00 - Substitution Procedures
- 00 31 00 - Available Project Information
- 00 31 26 - Existing Hazardous Material Information
- 00 41 00 - Bid Form
- 00 43 13 - Bid Security Form
- 00 45 13 - Responsibility Detail Form
- 00 52 00 - Agreement Form
- 00 61 13.13 - Performance Bond
- 00 61 13.16 - Payment Bond
- 00 61 23 - Retainage Bond
- 00 72 00 - General Conditions
- 00 73 16 - Insurance Requirements
- 00 73 46 - Washington State Prevailing Wage Rates
- 00 73 63 - Security Requirements

SPECIFICATIONS

DIVISION 01 -- GENERAL REQUIREMENTS

- 01 10 00 - Summary
- 01 14 00 - Work Restrictions
- 01 20 00 - Price and Payment Procedures
- 01 26 00 - Change Management Procedures
- 01 29 73 - Schedule of Values
- 01 30 00 - Administrative Requirements
- 01 31 23 - Web-based Construction Management
- 01 32 16 - Construction Progress Schedule
- 01 33 00 - Submittal Procedures
- 01 35 29 - Health, Safety, and Emergency Response Procedures

- 01 35 43.13 - Hazardous Materials Handling Procedure
- 01 35 47 - Air and Noise Control Procedures
- 01 41 00 - Regulatory Requirements
- 01 42 19 - Reference Standards
- 01 45 00 - Quality Control
- 01 50 00 - Temporary Facilities and Controls
- 01 55 00 - Vehicular Access and Parking
- 01 57 13 - TESC and Project SWPPP
- 01 60 00 - Product Requirements
- 01 71 00 - Examination and Preparation
- 01 74 13 - Construction Cleaning
- 01 74 16 - Soil Characteristics and Waste Management
- 01 77 00 - Closeout Procedures

DIVISION 2 - EXISTING CONDITIONS

- 02 07 00 - Selective Demolition
- 02 82 00 - Asebstos Abatement

DIVISION 06 - ROUGH CARPENTRY

- 06 10 00 - Miscellaneous Carpentry

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

- 07 25 00 - Weather Barriers
- 07 62 00 - Sheet Metal Flashing and Trim
- 07 92 00 - Joint Sealants

DIVISION 08 - OPENINGS

- 08 32 13 - Sliding Aluminum-Framed Glass Door
- 08 40 00- Aluminum Entrances and Storefronts
- 08 71 10 - Door Hardware

DIVISION 09 - FINISHES

- 09 22 16 - Non-structural Metal Framing
- 09 51 00 - Acoustical Ceilings
- 09 91 00 - Painting (Not In Contract - By Others)

APPENDICES

- Appendix A - Port of Tacoma Construction SWPPP Short Form
- Appendix B - Phase 1 Construction Restart COVID-19 Job Site Requirements

Appendix C - City of Tacoma Commercial Alteration Permit #BLDCA22-0031
END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

A. Contract Drawings: The following drawings are a part of the Contract Documents:

Sheet No.	Drawing Title
G1	COVERSHEET
G2	GENERAL INFORMATION
A1.1	FLOOR PLAN
A1.2	COURTYARD DEMO PLAN
A1.3	COURTYARD FLOOR PLAN
A1.4	REFLECTED CEILING PLAN
A2.1	EXTERIOR ELEVATIONS - COURTYARD
A2.2	EXTERIOR ELEVATIONS

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

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**BUILDING 326 STOREFRONT WINDOW REPLACEMENT, PARTITION BRACING AND ISOLATED
SIDING PAINTING**

PROJECT NO. 101532.01 | CONTRACT NO. 071543

Scope of Work:	<p>The Work required for this Project includes:</p> <p>All labor and materials to complete selective demolition and disposal of existing storefront windows and sliding glass doors and abatement, as necessary, to complete selective demolition. All labor, tools and materials as necessary to install new storefront windows and sliding glass doors. The work includes all labor and material associated with Miscellaneous Carpentry, Weather Barriers, Sheet Metal Flashing and Trim, Joint Sealants and Door Hardware. The work includes all labor and material as necessary to install wall braces. Exterior painting IS NOT included in the Work. All work shall be completed in accordance with the Drawings and Project Manual in accordance with the Work Restrictions</p>
Bid Estimate:	<p>Estimated cost range is \$190,000 to \$220,000, plus Washington State Sales Tax (WSST).</p>
Sealed Bid Date/ Time/Location:	<p>Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington 98421 until 1:00 P.M. on April 14th, 2022, at which time they will be publicly opened and read aloud and the apparent low bid will be determined.</p>
Pre-Bid Conference and at Site Tour:	<p>Mandatory pre-Bid conferences and site visits have been set for Wednesday, March 30th at 10:00AM and Thursday, March 31st 2:00PM. Attendance is required at only one visit. The site visit will convene at the project site.</p> <p>The following Personal Protective Equipment is required for the site visit: sturdy shoes and reflective vest.</p> <p>Attendees will be required to sign a Release and Acceptance of Responsibility and Acknowledgement of Risks Form prior to entering the site and shall provide their own Personal Protection Equipment (PPE as required above.</p>
Bid Security:	<p>Each Bid must be accompanied by a Bid security in an amount equal to five (5 percent of the Base Bid in a form allowed by the Instructions to Bidders.</p>
Contact Information:	<p>Any questions to the Port may be emailed to procurement@portoftacoma.com. No oral responses will be binding by the Port.</p>

Questions will not be accepted after seven (7) days prior to the Bid Date.

Bidding
Documents:

Plans, Specifications, Addenda, and Plan Holders List for this Project are available on-line through The Port of Tacoma's Website portoftacoma.com. Click on "Contracts," "Procurement," and then the Procurement Number 071543. Bidders must subscribe to the Holder's List on the right hand side of the screen in order to receive automatic email notification of future addenda and to be placed on the Holder's List.

Contact procurement@portoftacoma.com with questions. Holder's Lists will be updated regularly. Additional Instructions available in Section 00 21 00 - Instructions to Bidders.

Public Works
Training
Requirements:

Effective July 1, 2019, all businesses are required to have training before bidding on public works projects and prevailing wage under RCW 39.04.359 and RCW 39.12, or is on the list of exempt businesses maintained by the Department of Labor and Industries. The bidder must designate a person or persons to be trained on these requirements. The training will be provided by the Department of Labor and Industries or by a training provider whose curriculum is approved by the Department of Labor and Industries.

Please refer to Labor and Industries' web site (https://www.lni.wa.gov/TradesLicensing/PrevWage/Contractors/Training.asp?utm_medium=email&utm_source=govdelivery) for more information and training dates, requirements, and exemptions. Failure to attend this training could result in a determination of "not responsible" and the bidder not being awarded a public works contract.

END OF SECTION

PART 1 - SUMMARY

1.01 DEFINITIONS

All definitions set forth in the Agreement, the General Conditions of the Contract for Construction, and in other Contract Documents are applicable to the Bidding Documents.

- A. "Addenda" are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections. The contents of an Addendum are issued in no particular order and therefore should be carefully and completely reviewed.
- B. An "Apprentice" is a worker for whom an apprenticeship agreement has been registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).
- C. "Award" means the formal decision by the Port of Tacoma ("Port") notifying a Responsible Bidder with the lowest responsive Bid of the Port's acceptance of their Bid and intent to enter into a Contract with the Bidder.
- D. The "Award Requirements" include the statutory requirements as a condition precedent to Award.
- E. The "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
- F. A "Bid" is a complete and properly signed proposal to do the Work, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.
- G. The "Bid Date" is the day and hour specified in the Bidding Documents, as may be changed through an Addendum, by which Bidders are required to submit Bids to the Port.
- H. The "Bid Form" is the form(s) included with the Bidding Documents, with Specification Section 00 41 00, through which a Bidder submits a Bid.
- I. A "Bidder" is a person or entity who submits a Bid.
- J. The "Bidding Documents" include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, any other sample bidding and contract forms, including those provided by reference, the Bid security, and the proposed Contract Documents, including any Addenda issued prior to the Bid Date.
- K. The "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- L. The "Schedule of Unit Prices" is a separate schedule on the Bid Form for Unit Pricing as an all-inclusive price per unit of measurement for materials, equipment, or services as described in the Bidding Documents or in the proposed Contract Documents for the optional use of the Port. Quantities are not predictions of amounts anticipated. The Port may, but is not obligated to, accept a Schedule of Unit Price if it accepts the Base Bid. The Schedule of Unit Prices are not factored into the evaluation of determining the low bid amount and are not included as part of the bid award amount.
- M. A "Sub-Bidder" is a person or entity of any tier who submits a bid or proposal to or through the Bidder for materials, equipment or labor for a portion of the Work.

1.02 BIDDER'S REPRESENTATIONS

By making its Bid, each Bidder represents that:

- A. **BIDDING DOCUMENTS.** The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.
- B. **PRE-BID MEETING.** The Bidder has attended pre-Bid meeting(s) required by the Bidding Documents. Attendance at a mandatory meeting or training session means that, in the sole opinion of the Port, a Project representative of a Bidder has attended all or substantially all of such meeting or session.
- C. **BASIS.** Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, and is made without exception.
- D. **EXAMINATION.** The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents including, but not limited to, any liquidated damages, insurance provisions, and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed, has correlated its observations with the requirements of the proposed Contract Documents, and it has satisfied itself as to the nature, location, character, quality, and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services, and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or that may affect performance of the Work or the cost or difficulty thereof, including, but not limited to, those conditions and matters affecting transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power, and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to, and at all times during, the performance of the Work. The failure of the Bidder to fully acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.
- E. **PROJECT MANUAL.** The Bidder has checked its copies of the Project Manual (if any) with the table of contents bound therein to ensure the Project Manual is complete.
- F. **SEPARATE WORK.** The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications with any other contracts to be awarded separately from, but in connection with, the Work being Bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the Contract being Bid upon.
- G. **LICENSE REQUIREMENTS.** The Bidders and Sub-Bidders are registered and hold all licenses required by the laws of Washington, including a certificate of registration in compliance with RCW 18.27, for the performance of the Work specified in the Contract Documents.
- H. **CERTIFICATION.** The Bidder verifies under penalty of perjury that the Bidder has not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three (3) year period immediately preceding the Bid Date.
- I. **NO EXCEPTIONS.** Bids must be based upon the materials, systems, and equipment described and required by the Bidding Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

1. Bidders may obtain complete sets of the Bidding Documents from The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts" then "Procurement."
2. Complete Sets. Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for obtaining updated information. The Port does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.
3. Conditions. The Port makes copies of the Bidding Documents available only for the purpose of obtaining Bids on the Work and does not confer a license or grant permission for any other use.
4. Legible Documents. To the extent any Drawings, Specifications, or other Bidding Documents are not legible, it is the Bidder's responsibility to obtain legible documents.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. Format. The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in, or phases of the Project.
2. Duty to Notify. Bidders shall promptly notify the Port in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions.
3. Products and Installation. All Bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Port any objections (in writing) no later than seven (7) days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.
4. Written Request. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written email request to procurement@portoftacoma.com at least seven (7) days prior to the Bid Date.
5. Request to Modify Responsibility Criteria. No later than seven (7) days prior to the Bid Date, a potential Bidder may request in writing that the Port modify the Responsibility Criteria. The Port will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the Criteria, the Port will issue an Addendum identifying the new Criteria.
6. Addenda. The Bidder shall not rely on oral information provided at any pre-Bid meetings or during site visits. Verbal statements made by representatives of the Port are for informational purposes only. Any interpretation, correction, or change of the Bidding Documents will be made solely by written Addendum. Interpretations, corrections, or changes of the Bidding Documents made in any manner other than by written Addendum, including but not limited to, oral statements will not be binding, and Bidders shall not rely upon such statements, interpretations, corrections, or changes. The Port is not responsible for explanations or interpretations of the Bidding Documents other than in a written Addendum.

7. Site Visits. Any site visits are provided as a courtesy to potential Bidders to assist them in becoming familiar with the Project site conditions. However, only the Bidding Documents, including any issued Addenda, may be relied upon by Bidders.
8. Singular References. Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
9. Utilities and Runs. The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. For substitutions during bidding, refer to Section 00 26 00 – Substitution Procedures.

D. ADDENDA

1. Distribution. All Addenda will be written and will be made available on the Port's website or any other source specified by the Port for the Project.
2. Copies. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. Verification and Acknowledgment of Receipt. Prior to submitting a Bid, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt and consideration of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. Form. Bids (including required attachments) shall be submitted on forms identical to the Bid Form included with the Bidding Documents. No oral, email, or telephonic responses or modifications will be considered.
2. Entries on the Bid Form. All blanks on the Bid Form shall be filled in by typewriter, printer, or manually in ink.
3. Figures. All sums shall be expressed in figures, not words. Portions of the Bid Form may require the addition or multiplication of component bids to a total or the identification of component amounts within a total. In case of discrepancy between unit prices listed and their sum(s), the unit prices listed shall govern (rather than the sum).
4. Initial Changes. Any interlineation, alteration, or erasure shall be initialed by an authorized representative of the Bidder.
5. Bid Breakdown. The Bid Form may contain, for the Port's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.
 - a. For lump-sum Bids, the total Contract Sum shall be submitted.
 - b. For unit-price Bids, a price shall be submitted for each item of the Work, an extension thereof, and, if requested, the total Contract Sum.
6. Schedule of Unit Prices. All Unit Prices under this schedule shall be bid. The Port reserves the right, but is not obligated, to reject any Bid on which all requested Schedule of Unit Prices are not Bid.
7. No Conditions. The Bidder shall make no conditions or stipulations on the Bid Form, nor qualify its Bid in any manner.

8. Identity of Bidder. The Bidder shall include in the specified location on the Bid Form, the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. The Port verifies signature authority on the Labor and Industries website <https://fortress.wa.gov/lni/bbip/Search.aspx> under the contractor registration business owner information. If the business owner information is not current, the Bidder shall show proof of authority to sign at the request of the Port. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder
9. Bid Amounts Do Not Include Sales Tax. The Work to be performed constitutes a "retail sale" as this term is defined in RCW 82.04.050. Thus, the Base Bid amount shall include in the sum stated all taxes imposed by law, EXCEPT WASHINGTON STATE AND LOCAL SALES TAX due on the Base Bid. The engaged Contractor will pay retail sales tax on all consumables used during the performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Base Bid price and in any other prices set forth on the Bid Form. The Port will pay state and local retail sales tax due on each progress payment and final payment to the engaged Contractor for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local government.

B. BID SECURITY

1. Purpose and Procedure. Each Bid shall be accompanied by Bid security payable to the Port in the form required by the Bidding Documents and equal to five (5) percent of the Base Bid only (i.e., not including any Alternates or Unit Prices). The Bid security constitutes a pledge by the Bidder to the Port that the Bidder will enter into the Contract with the Port in the form provided, in a timely manner, and on the terms stated in its Bid, and will furnish in a timely manner, the payment and performance bonds, certificates of insurance, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the Bid security shall be forfeited to the Port as liquidated damages, not as a penalty. By submitting a Bid, each Bidder represents and agrees that the Bid security, if forfeited, is a reasonable prediction on the Bid Date of future damages to the Port. Failure of the Bidder to provide Bid Security as required shall render the bid non-responsive.
2. Form. The Bid security shall be in the form of a certified or bank cashier's check payable to the Port or a Bid bond executed by a bonding company reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, possess an A.M. Best rating of "A-," Fiscal Size Category (FSC) six (6) or better, and be authorized by the U.S. Department of the Treasury. The Bid security shall be signed by the person or persons legally authorized to bind the Bidder. Bid bonds shall be submitted using the form included with the Bidding Documents.
3. Retaining Bid Security. The Port will have the right to retain the Bid security of Bidders to whom an Award is being considered until the earliest of either: (a) mutual execution of the Contract, and the Port's receipt of payment and performance bonds, (b) the specified time has elapsed so that Bids may be withdrawn, or (c) when all Bids have been rejected.
4. Return of Bid Security. Within sixty (60) days after the Bid Date, the Port will release or return Bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all un-forfeited Bid securities will be returned. Bid security may be returned in the form provided or by separate payment.

C. SUBMISSION OF BIDS

1. Procedure. The Bid, the Bid security, and other documents required to be submitted with the Bid, shall be enclosed in a sealed envelope identified with the Project name and number and the Bidder's name and address. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face of the mailing envelope.
 - a. If a Bid is mailed, it shall be addressed to the Port of Tacoma, Contracts Department, 1 Sitcum Plaza, Tacoma, WA 98421.
 - b. If a Bid is delivered, it shall be delivered to the Front Reception Desk, Port of Tacoma, 1 Sitcum Plaza, Tacoma, WA 98421.
 - c. The time stamp clock at the Front Reception Desk at 1 Sitcum Plaza is the Port's official clock.
2. Deposit. Bids shall be deposited at the designated location prior to the Bid Date indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the Bid Date and time specified shall be returned without consideration at the discretion of the Port, or rejected at the time of receipt.
3. Delivery. The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.
4. Form. Oral, facsimile, telephonic, electronic, or email Bids are invalid and will not be considered.

D. MODIFICATION OR WITHDRAWAL OF BID

1. After the Bid Date. A Bid may not be modified, withdrawn, or canceled by the Bidder during a ninety (90) day period following the Bid Date, and each Bidder so agrees by virtue of submitting its Bid.
2. Before the Bid Date. Prior to the Bid Date, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. The notice shall be in writing, with the signature of the Bidder, and shall be worded so as not to reveal the amount of the original Bid. Email notice will not be accepted. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Port in time to be withdrawn before the Bid opening.
3. Resubmittal. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids, provided that they are then fully in conformance with these Instructions to Bidders.
4. Bid Security with Resubmission. Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

E. COMMUNICATIONS

1. Communications from a Bidder related to these Instructions to Bidders must be in writing to procurement@portoftacoma.com. Communications, including but not limited to, notices and requests by Sub-Bidders shall be made through the Bidder and not directly by a Sub-Bidder to the Port.

1.05 CONSIDERATION OF BIDS

- A. **OPENING OF BIDS.** Unless stated otherwise in the Advertisement or Invitation to Bid or an Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and any Alternate Bids will promptly (and generally within twenty-four (24) hours) be made available to Bidders and other interested parties.
- B. **REJECTION OF BIDS.** The Port shall have the right, but not the obligation, to reject any or all Bids for any reason, or for no reason, to reject a Bid not accompanied by the required Bid security, or to reject a Bid which is in any way incomplete or irregular.
- C. **BIDDING MISTAKES.** The Port will not be obligated to consider notice of claimed Bid mistakes received more than twenty-four (24) hours after the Bid Date. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from Bidding on the Project if a subsequent call for Bids is made for the Project.
- D. **ACCEPTANCE OF BID (AWARD)**
 - 1. **Intent to Accept.** The Port intends, but is not bound, to Award a Contract to the Responsible Bidder with the lowest responsive Bid, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Port has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.
 - 2. **Requirements for Award.** Before the Award, the lowest responsive Bidder must be deemed Responsible by the Port and must satisfy all Award Requirements.
- E. **BID PROTEST PROCEDURES**
 - 1. **Procedure.** A Bidder protesting, for any reason, the Bidding Documents, a Bidding procedure, the Port's objection to a Bidder or a person or entity proposed by the Bidder, including but not limited to, a finding of non-Responsibility, the Award of the Contract or any other aspect arising from, or relating in any way to, the Bidding, shall cause a written protest to be filed with the Port within two (2) business days of the event giving rise to the protest. (Intermediate Saturdays, Sundays, and legal holidays are not counted as business days.) The written protest shall include the name of the protesting Bidder, the bid solicitation number and title under which the protest is submitted, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, evidence that the apparent low bidder has been given notice of the protest, and the specific relief requested. The written protest shall be sent by email to procurement@portoftacoma.com.
 - 2. **Consideration.** Upon receipt of the written protest, the Port will consider the protest. The Port may, within three (3) business days of the Port's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Port, the Contracts Director of the Port, or his or her designee, will review the issues and promptly furnish a final and binding written decision to the protesting Bidder, and any other affected Bidder(s), within six (6) business days of the Port's receipt of the protest. (If more than one (1) protest is filed, the Port's decision will be provided within six (6) business days of the Port's receipt of the last protest.) If no reply is received from the Port during the six (6) business-day period, the protest will be deemed rejected.
 - 3. **Waiver.** Failure to comply with these protest procedures will render a protest waived.

4. Condition Precedent. Timely and proper compliance with, and exhaustion of, these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. THE LOWEST RESPONSIVE BIDDER SHALL:

1. Responsibility Detail Form. Within 24 hours of the Low Responsive Bidder Selection Notification, the apparent low Bidder shall submit to the Port the Responsibility Detail Form and other required documents (Section 00 45 13) executed by an authorized company officer. As requested from the Port, the low responsive Bidder shall provide written confirmation that the person signing the Bid on behalf of the Bidder was duly authorized at the time of bid, a detailed breakdown of the Bid in a form acceptable to the Port, and other information required by the Port.
2. The apparent low Bidder shall submit to the Port upon request:
 - a. Additional information regarding the use of the Bidder's own forces and the use of subcontractors and suppliers;
 - b. The names of the persons or entities (including a designation of the Work to be performed with the Bidder's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work (i.e., either a listed Sub-Bidder or a Sub-Bidder performing Work valued at least ten (10) percent of the Base Bid), consistent with the listing required with the Bid; and
 - c. The proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.
3. Failure to provide any of the above information in a timely manner will constitute an event of breach permitting forfeiture of the Bid security.
4. Bidder Responsibility. The Bidder will be required to establish, to the satisfaction of the Port, the reliability and responsibility of itself and the persons or entities proposed to furnish and perform the Work described in the Bidding Documents. If requested, the Bidder shall meet with the Port to discuss the Bid, including any pricing, the Bid components, and any assumptions made by the Bidder.
5. Objection. Prior to an Award of the Contract, the Port will notify the Bidder in writing if the Port, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder. Upon receiving such objection, the Bidder may, at Bidder's option: (a) withdraw their Bid, (b) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by such substitution, or (c) file a protest in accordance with the Bidding Documents.
6. Change. Persons and entities proposed by the Bidder to whom the Port has made no reasonable objection must be used on the Work for which they were proposed and shall not be changed, except with the written consent of the Port.
7. Right to Terminate. The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. If a Bidder makes a material misrepresentation on a Qualification Statement, the Port has the right to terminate the Contract for cause and may then pursue any remedies that exist under the Contract or that are otherwise available.

- B. INFORMATION FROM OTHER BIDDERS: All other Bidders designated by the Port as under consideration for Award of a Contract shall also provide a properly executed Qualification Statement, if so requested by the Port.

1.07 PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND, AND INSURANCE

- A. BOND REQUIREMENTS. Within fifteen (15) days after the Port's Notice of Award of the Contract, the successful Bidder shall obtain and furnish statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. Bonds shall be written for one hundred (100) percent of the contract award amount, plus Washington State Sales Tax and Change Orders. The cost of such bonds shall be included in the Base Bid.
1. On contracts of one hundred fifty thousand dollars (\$150,000) or less, at the option of the Contractor or the General Contractor/Construction Manager as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten (10) percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the employment security department, and the department of labor and industries and settlement of any liens filed under RCW 60.28, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.
 2. On contracts of one hundred fifty thousand dollars (\$150,000) or less, the Port may accept a full payment and performance bond from an individual surety or sureties.
- B. TIME OF DELIVERY AND FORM OF BONDS. The successful Bidder shall deliver an original copy of the required bonds to the Port, 1 Sitcum Plaza, Tacoma, WA 98421, within the time specified in the Contract Documents.
- C. INSURANCE. The successful Bidder shall deliver a certificate of insurance from the Bidder's insurance company that meets or exceeds all requirements of the Contract Documents.
- D. GOVERNMENTAL REQUIREMENTS. Notwithstanding anything in the Bidding or Contract Documents to the contrary, the Bidder shall provide all bonding, insurance, and permit documentation as required by governmental authorities having jurisdiction for any portions of the Project.

1.08 FORM OF AGREEMENT

- A. FORM TO BE USED. The Contract for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental, or Special Conditions, and the other Contract Documents included with the project manual.
- B. CONFLICTS. In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.
- C. CONTRACT DELIVERY. Within fifteen (15) days after Notice of Award, the Bidder shall submit a signed Contract to the Port in the form tendered to the Bidder and without modification.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for substitutions.

1.02 DEFINITIONS/CLARIFICATIONS

- A. Substitutions. Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. The Contract Documents include performance specifications for products and equipment which meet Project requirements. In those cases where a representative item or manufacturer is named in the specification, it is provided for the sole purpose of identifying a product meeting the required functional performance, and where the words "or equal" are used, a substitution request as further described, is not required.
- C. Where non-competitive or sole source products or manufacturers are explicitly specified with the words "or approved equal," or "Engineer approved equal," or "as approved by the Engineer" are used, they shall be taken to mean "or approved equal." In these cases a substitution request as further described in this Section, is required.

1.03 SUBMITTALS

- A. Substitution Request Form. Use copy of form located at the end of this Section.
- B. Pre-Bid Substitution Requests. Submit one (1) PDF of the Substitution Request Form along with all supporting documentation for consideration of each request. Identify product, fabrication, or installation method to be replaced. Include Drawing numbers and titles. Substitution requests prior to the Bid Date may originate directly from a prime Bidder, or from a prospective Sub-Bidder.
1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product, fabrication, or installation cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Product Data, including drawings and descriptions of products, fabrication, and installation procedures.
 - d. Samples, where applicable or requested.
 - e. Certificates and qualification data, where applicable or requested.
 - f. Research reports evidencing compliance with building code in effect for the Project.
 2. Engineer's Action. Engineer will review substitution requests if received electronically to procurement@portoftacoma.com at least seven (7) days prior to the Bid Date. Substitution requests received after this time will not be reviewed.
 - a. Forms of Acceptance. Substitution requests will be formally accepted via written addendum prior to the Bid Date. Bidders shall not rely upon approvals made in any other manner.
 - b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.

- c. The Port's decision of approval or disapproval of a proposed substitution shall be final.
- C. Post-Award Substitution Requests must be submitted by the Contractor and not a Subcontractor nor Supplier.
 - 1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification Section. Significant qualities may include, but are not limited to, attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses. Also provide names and addresses of the applicable architect, engineer, and owner.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for the Project.
 - j. Comparison of the approved Baseline Project Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
 - 2. Engineer's Action. If necessary, Engineer will request additional information or documentation for evaluation within seven (7) calendar days of receipt of a request for substitution. Engineer will notify Contractor through Port of acceptance or rejection of proposed substitution within fifteen (15) calendar days of receipt of request, or seven (7) calendar days of receipt of additional information or documentation, whichever is later.
 - a. Forms of Acceptance. Change Order or Minor Change in Work.

- b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.
- 3. Substitutions for Cause. Submit requests for substitution immediately upon discovery of need for change, but not later than fourteen (14) days prior to date required for preparation and review of related submittals.
 - a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - 1) Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 2) Requested substitution will not adversely affect the Baseline Project Schedule.
 - 3) Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 4) Requested substitution is compatible with other portions of the Work.
 - 5) Requested substitution has been coordinated with other portions of the Work.
 - 6) Requested substitution provides specified warranty.
 - 7) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- 4. Substitutions for Convenience. Engineer will consider Contractor's requests for substitution if received within fourteen (14) days after the Notice of Award.
 - a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - 1) Requested substitution offers Port a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Port must assume. Port's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Port, and similar considerations.
 - 2) Requested substitution does not require extensive revisions to the Contract Documents.
 - 3) Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 4) Requested substitution will not adversely affect the Baseline Project Schedule.
 - 5) Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 6) Requested substitution is compatible with other portions of the Work.
 - 7) Requested substitution has been coordinated with other portions of the Work.
 - 8) Requested substitution provides specified warranty.

- 9) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

D. Substitutions will not be considered when:

1. Indicated or implied on shop drawings or product data submittals without formal request submitted in accordance with this Section.
2. Acceptance will require substantial revision of Contract Documents or other items of the Work.
3. Submittal for substitution request does not include point-by-point comparison of proposed substitution with specified product.

1.04 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

PROJECT TITLE: Building 326 Storefront Window Replacement, Partition Bracing and Isolated Siding Painting **PROJECT NO.: 101532.01**

SUBMITTED BY: _____ CONTRACT NO.: 071543

PRIME/SUB/SUPPLIER: _____ DATE: _____

Specification Title: _____ Section No.: _____

Description: _____ Paragraph: _____

Page No.: _____

Proposed Substitution: _____

Trade Name: _____ Model No.: _____

Manufacturer: _____

Address: _____ Phone No.: _____

Installer: _____

Address: _____ Phone No.: _____

Differences between proposed substitution and specified product: _____

☐ Point-by-Point comparative data attached - REQUIRED

Reason for not providing specified item: _____

Similar Installation:

Project: _____ A/E: _____

Address: _____

Owner: _____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Supporting Data Attached:

☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other: _____

Applicable to Substitution Requests During Construction:

Proposed to Port for accepting substitution: \$ _____

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ # days.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.

- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay Baseline Project Schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted By: _____
Signed By: _____ Firm: _____
Address: _____

Telephone: _____ Email: _____
Attachments: _____

A/E's REVIEW AND RECOMMENDATION

- ☐ Approved Substitution
- ☐ Approved Substitution as Noted
- ☐ Reject Substitution - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

ENGINEER'S REVIEW AND ACTION

- ☐ Substitution Approved - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- ☐ Substitution Approved as Noted - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- ☐ Substitution Rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

END OF SECTION

PART 1 - GENERAL

1.01 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to Bidders , as follows:

1. Hazardous Material Survey: Entitled Hazardous Building Materials Assessment, dated 18 June 2021. See Section 02 82 00 - Asbestos Abatement

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section provides the notification required for disclosure of asbestos, lead-containing or other hazardous materials.

1.02 HAZARDOUS MATERIALS NOTICE

- A. Contractor is notified that certain portions of the Work area are known to contain lead or asbestos-containing materials (ACM), as detailed in a Hazardous Materials Assessment, 02 82 00 - Asbestos Abatement. A copy of the assessment is included in the referenced section.
- B. Abatement, if required, shall be the responsibility of the Contractor.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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BIDDER'S NAME: _____

PROJECT TITLE: BUILDING 326 STOREFRONT WINDOW REPLACEMENT, PARTITION BRACING AND ISOLATED SIDING PAINTING

The undersigned Bidder declares that it has read the Contract Documents (including documents provided by reference), understands the conditions under which the Work will be performed, has examined the Project site, and has determined for itself all situations affecting the Work herein Bid upon. Bidder proposes and agrees, if this Bid is accepted, to provide at Bidder's own expense, all labor, machinery, tools, materials, etc., including all Work incidental to, or described or implied as incidental to such items, according to the Contract Documents, and that the Bidder will complete the Work within the time stated, and that Bidder will accept in full the lump sum or unit price(s) set forth below:

ITEM NO.	DESCRIPTION OF ITEM	QTY	UOM	UNIT PRICE	EXTENDED PRICE (QTY. x UNIT PRICE)
1	Mobilization and Demobilization	1	LS		
2	Project Administration	1	LS		
3	Demolish, Furnish and Install Storefront Windows and Sliding Glass Door Assemblies	1	LS		
4	Wall Bracing	1	LS		
5	Unforeseen Conditions Allowance	1	LS	\$7,500	\$7,500

TOTAL BID AMOUNT	
10.2% WASHINGTON STATE SALES TAX (WSST) ON BASE BID SUBTOTAL	
BID TOTAL (WITH WSST)	

Note: Show prices in figures only.

Evaluation of Bids. In accordance with the provisions of the Contract Documents, Bids will be evaluated to determine the lowest Base Bid Subtotal offered by a responsible Bidder submitting a responsive Bid.

Schedule of Unit Prices. The unit prices are proposed to apply only in the event of additions to, or deletions from, the work required and ordered. All prices shall include complete installation without Washington State Sales Tax. The bidder shall propose a price for each item; failure to propose a price for each item may render the bid non-responsive. The Port reserves the right to accept or reject the unit prices proposed.

Non-Collusion Representation. The Bidder declares under penalty of perjury that the Bid submitted is genuine and not a sham or collusive bid, or made in the interest or on behalf of any person or firm not therein named; and further represents that the Bidder has not directly or indirectly induced or solicited any other bidder to submit a sham bid, or encouraged any other person or corporation to refrain from bidding; and that the Bidder has not in any manner sought by collusion to secure to the Bidder an advantage over any other bidder or bidders.

RCW 39.04.350 Certification. The Bidder represents and certifies, under penalty of perjury, that within the three- (3-) year period immediately preceding the Bid Date, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, nor through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, nor 49.52 RCW.

Addenda. Bidder acknowledges receipt and acceptance of all Addenda through No. ____ (Identify Last Addenda By Number)

Bid Security. A certified check, cashier's check, or other obligation of a bank, or a bid bond in substantially the form set forth in Section 00 43 13, Bid Security Form for at least five (5) percent of the Base Bid Subtotal, shall be submitted with this Bid.

Apprenticeship Requirements. For Bids greater than one million (\$1,000,000) dollars, the apprentice labor hours required for this project are fifteen (15) percent of the total labor hours. The Bidder agrees to utilize this level of apprentice participation.

Name of Firm

Date

Signature

By Title

Mailing Address

City, State Zip Code

Telephone Number

Email Address

WA State Contractor's License No.

Employment Security Department No.

Identification of Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity

END OF SECTION

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and
_____, as Surety, are held and firmly bound unto
the PORT OF TACOMA as Obligee, in the penal sum of _____
Dollars, for the payment of which the Principal and Surety bind themselves, their heirs, executors,
administrators, successors and assigned, jointly and severally, by these present.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for
_____, according to the terms of the proposal or bid
made by the Principal therefor, and the Principal shall duly make and enter into a contract with the
Obligee in accordance with the terms of said proposal or bid and award and shall give bond for the
faithful performance thereof, with Surety or Sureties approved by the Obligee; or, if the principal shall, in
case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the
call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and
effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages,
the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 20____

BY _____
PRINCIPAL

BY _____
SURETY

AGENT AND ADDRESS

Note: Bidder may submit Surety's bid bond form, provided it is similar in substance, made out in the
name of the Port of Tacoma, and that the agent's name and address appear as specified. Bonds
containing riders limiting responsibility for toxic waste or limiting the term of responsibility will be rejected.

END OF SECTION

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THIS IS NOT TO BE SUBMITTED WITH A BID.

THE LOW RESPONSIVE BIDDER SHALL BE REQUIRED TO COMPLETE THIS RESPONSIBILITY DETAIL FORM AS SPECIFIED IN SECTION 00 21 00 - INSTRUCTIONS TO BIDDERS. **THIS COMPLETED RESPONSIBILITY DETAIL FORM SHALL BE SUBMITTED ELECTRONICALLY (PDF) VIA EMAIL TO THE CONTACT(S) IDENTIFIED IN THE LOW RESPONSIVE BIDDER SELECTION NOTIFICATION.**

BIDDER'S COMPANY NAME: _____

For the below Mandatory Bidder Responsibility Criteria, please mark the appropriate choice.

1.01 MANDATORY BIDDER RESPONSIBILITY CRITERIA

- A. The Bidder shall meet the following mandatory responsibility criteria as described in RCW 39.04.350(1). The Bidder shall be rejected as not responsible if any answer to questions 1 through 5 is "No" or any answer to questions 6 through 8 is "Yes."
1. Does the Bidder have a Certificate of Registration in compliance with RCW 18.27?
☐ Yes ☐ No
 2. Does the Bidder have a current Washington State Unified Business Identifier number?
☐ Yes ☐ No
 3. Does the Bidder have Industrial Insurance Coverage for the Bidder's employees working in Washington State as required in RCW 51?
☐ Yes ☐ No
 4. Does the Bidder have an Employment Security Department number as required in RCW 50?

****Attach** letter dated within six (6) months of Bid Date.*

**Request a letter electronically by clicking on the following link
<https://fortress.wa.gov/esd/twt/pwcinternet/> or by emailing a request to
publicworks@esd.wa.gov.*

☐ Yes ☐ No
 5. Does the Bidder have a Washington State Excise Tax Registration number as required in RCW 82?

☐ Yes ☐ No
 6. Has the Bidder been disqualified from bidding on any public works project under RCW 39.06.010 or 39.12.065(3)?

☐ Yes ☐ No
 7. Has the Bidder violated RCW 39.04.370 more than one (1) time as determined by the Washington State Department of Labor and Industries?

☐ Yes ☐ No

8. Has the Bidder ever been found to be out of compliance with Apprenticeship Utilization requirements of RCW 39.04.320?
- ☐ Yes ☐ No
9. Has the Bidder ever been found to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three- (3-) year period immediately preceding the date of this bid solicitation?
- ☐ Yes ☐ No
10. Has the Bidder completed the training required by RCW 39.04.350, or is the Bidder on the list of exempt businesses maintained by the Department of Labor and Industries?
- ☐ Yes ☐ No

If any answer to questions 1 through 5 is "No" or any answer to questions 6 through 8 is "Yes" - **STOP HERE** and contact the Contract Administrator. The Bidder is not responsible for this Work. Otherwise proceed to 1.02. **Provide attached to this completed form documentation to confirm responsibility criteria.**

For remaining criteria below, check or fill-out the appropriate item. Based upon the answer provided by the Bidder, the Port may request additional information or seek further explanation. As needed, provide backup documentation for any explanations listed below.

1.02 CONTRACT AND REGULATORY HISTORY

- A. The Port will evaluate whether the Bidder's contract and regulatory history demonstrates an acceptable record of past project performance and consistent responsibility. The Bidder shall answer the following questions. The Bidder may be rejected as not responsible if any answer to questions 1 through 5 below is "Yes."

1. Has the Bidder had a contract terminated for cause or default in the last five (5) years?
- ☐ Yes, **If YES, explain below.** ☐ No
-
2. Has the Bidder required a Surety to take over all, or a portion of, a project to cure or respond to an asserted default or material breach of contract on the part of the Bidder on any public works project in the last five (5) years?
- ☐ Yes, **If YES, explain below.** ☐ No
-
3. Have the Bidder and major Sub-Bidders been in bankruptcy, reorganization, and/or receivership on any public works project in the last five (5) years?
- ☐ Yes, **If YES, explain below.** ☐ No
-

4. Have the Bidder and major Sub-Bidders been disqualified by any state or local agency from being awarded and/or participating on any public works project in the last five (5) years?

☐ Yes, **If YES, explain below.** ☐ No

5. Are the Bidder and major Sub-Bidders currently a party to a formal dispute resolution process with the Port (i.e., a pending mediation, arbitration, or litigation)?

☐ Yes, **If YES, explain below.** ☐ No

1.03 ACCIDENT/INJURY EXPERIENCE

- A. The Port will evaluate the Bidder's accident/injury Experience Modification Factor ("EMF") from the Washington State Department of Labor and Industries to assess whether the Bidder has an acceptable safety record preventing personal injuries on projects.
- B. List the Bidder's accident/injury EMF for the last five (5) years. An experience factor is calculated annually by the Washington State Department of Labor and Industries.

Year	Effective Year	Experience Factor
1		
2		
3		
4		
5		

If the Bidder has received an EMF of greater than 1.0 for any year, explain the cause(s) of the designation and what remedial steps were taken to correct the EMF. The Bidder may be rejected as not responsible if the Bidder's EMF is greater than 1.0 and sufficient remedial steps have not been implemented.

1.04 WORK PERFORMED BY BIDDER

- A. The Bidder shall state the amount of the Work, as an equivalent to the Base Bid, excluding taxes, insurance, and bonding, the Bidder will execute with its own forces.

_____ %

1.05 ADDITIONAL CONTRACTOR INFORMATION

- A. As part of completing this Responsibility Detail Form, **submit the following information with the completed Responsibility Detail Form:**
1. Bidder's recent job resume, including a list of similar projects performed and contact information for the similar project owner(s), a brief description of work, start and end dates, and contract amount.
 2. Resumes of Bidder's proposed project manager and job superintendent.
- B. The Bidder's failure to provide the required project information may result in a determination of the Bidder being declared non-responsible by the Port.
-

- C. The Bidder shall submit this completed, **SIGNED** Responsibility Detail Form electronically (PDF), with all requested backup documentation, via email to the contact(s) noted on the Low Responsive Bidder Selection Notification.
- D. The Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and 39.04.350.
 - 1. Bidder shall verify major subcontractors meet the responsibility criteria required. Fill out one Port of Tacoma Public Works Project Bidder Evaluation Checklist for Subcontractors for each major subcontractor and submit to the Port with this form. Backup documentation is not required to be submitted.

PROJECT: Building 326 Storefront Window Replacement, Partition Bracing and Isolated Siding Painting

PROJECT NO.: 101532.01

CONTRACT NO.: 071543

Responsibility Certification Form

The Low responsive Bidder shall complete the Responsibility Detail Form, attach all documentation, and submit to the Port within twenty-four (24) hours following receipt of the Low Responsive Bidder Selection Notification. All forms shall be submitted electronically (PDF) via email to the contact(s) listed on the Selection Notice. Note, the same project may be used to demonstrate experience across multiple categories if applicable.

By completing and signing this Responsibility Detail Form, the Bidder is certifying that the information contained within the Form, the backup documentation, and any additional information requested by the Port is true and complete. The Bidder's failure to disclose the required information or the submittal of false or misleading information may result in the rejection of the Bidder's Bid, revocation of award, or contract termination.

The information provided herein is true and complete.

Signature of Authorized Representative

Date

Print Name and Title

**PORT OF TACOMA PUBLIC WORKS PROJECT BIDDER EVALUATION CHECKLIST FOR
SUBCONTRACTORS**

PROJECT TITLE: Building 326 Storefront Window Replacement, Partition
Bracing and Isolated Siding Painting

BIDDER: _____

CONTRACT AND PROJECT NUMBER: 071543/ 101532.01

This checklist shall be completed by the Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and RCW 39.04.350.

This checklist should be submitted to the Port of Tacoma Contracts Administrator within twenty-four (24) hours of request.

Document verification information or backup data is not to be submitted to the Port, this information should remain on file with the Contractor and be presented to the Port if requested at a later date.

Item No.	Item	Initials/Comments
1.	At the time of Bid submittal, have a certificate of registration in compliance with RCW 18.27: Check the L&I site https://fortress.wa.gov/lni/bbip/ . Verify that a subcontractor has an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87.	
2.	While reviewing registration information above, also check contractor's Employer Liability Certificate to verify workers' comp (industrial insurance) premium status – current account. Complete a "Submit Contractor Tracking Request" to be notified if the contractor fails to pay workers' comp premiums or renew their contractor registration or if their electrical contractor license is suspended or revoked within one year.	
3.	State excise tax registration number (Department of Revenue). (contractor's Washington State Unified Business Identifier and tax registration number) http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/ .	
4.	Not disqualified from bidding on any public works contract under RCW 39.06.010 or RCW 39.12.065(3). Check the Department of Labor and Industries http://www.lni.wa.gov/TradesLicensing/PrevWage/AwardingAgencies/DebarredContractors/ .	
5.	Verify subcontractors are registered with the Washington State Employment Security Department (ESD) and have an account number. Request a letter to be sent from the subcontractor electronically by clicking on the following link https://fortress.wa.gov/esd/twt/pwcinternet/ or by emailing a request to publicworks@esd.wa.gov . Include ESD#, UBI#, and business name in the email.	

Item No.	Item	Initials/ Comments
	Certificate of Coverage letter issued/dated within the last six (6) months. Document if subcontractor confirms in writing, under penalty of perjury, that it has no employees and this requirement does not apply.	

END OF SECTION

THIS AGREEMENT is made and entered into by and between the PORT OF TACOMA, a State of Washington municipal corporation, hereinafter designated as the "Port," and:

The "Contractor" is: _____ (Legal Name)

_____ (Address)

_____ (Address 2)

_____ (Phone No.)

The "Project" is: Building 326 Storefront Window Replacement, Partition Bracing and
Isolated Siding Painting _____ (Title)

101532.01 | 071543 _____ (Project/Contract No.)

401 E Alexander Ave Bldg 326 _____ (Project Address)

Tacoma, WA 98421 _____ (Project Address 2)

The "Engineer" is: Thais Howard, PE _____ (Engineer)

Director of Engineering _____ (Title)

thoward@portoftacoma.com _____ (Email)

(253) 888-4718 _____ (Phone No.)

The "Contractor's Representative" is: _____ (Representative)

_____ (Title)

_____ (Email)

_____ (Phone No.)

BACKGROUND AND REPRESENTATIONS:

The Port publicly solicited bids on the Contract Documents. The Contractor submitted a Bid to the Port on the _____ day of _____, 20____ to perform the Work.

The Contractor represents that it has the personnel, experience, qualifications, capabilities, and means to accomplish the Work in strict accordance with the Contract Documents, within the Contract Time and for the Contract Price, and that it and its Subcontractors satisfy the responsibility criteria set forth in the Contract Documents, including any supplemental responsibility criteria.

The Contractor further represents that it has carefully examined, and is fully familiar with, all provisions of the Contract Documents, including any Addenda, that it has fully satisfied itself as to the nature, location, difficulty, character, quality, and quantity of the Work required by the Contract Documents and the conditions and other matters that may be encountered at or near the Project site(s), or that may affect performance of the Work or the cost or difficulty thereof, including all applicable safety and site responsibilities, and that it understands and can satisfy all scheduling and coordination requirements and interim milestones.

AGREEMENT:

The Port and the Contractor agree as follows:

1.0 CONTRACTOR TO FULLY PERFORM THE WORK

The Contractor shall fully execute and complete the entire Work for the Project described in the Contract Documents, except to the extent specifically indicated in the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

2.0 DATE OF COMMENCEMENT

The date of commencement of the Work, which is the date from which the Contract Time is measured, shall be fixed as the date of execution of the Contract.

3.0 CONTRACT TIME AND LIQUIDATED DAMAGES

The Contractor shall achieve all interim milestones as set forth in the Contract Documents and Substantial Completion of the entire Work not later than **180** calendar days from execution of the Contract, subject to adjustments of this Contract Time as provided in the Contract Documents. While all work shall be completed within the 180 day performance period, site Work shall be completed in accordance with Section 01 14 00 - Work Restrictions. The Contractor shall achieve Final Completion of the entire Work within **30** calendar days of the date on which Substantial Completion is achieved.

Provisions for liquidated damages as a reasonable estimate of future loss, as of the date of this Agreement, are included in the Contract Documents. The parties agree that the stated liquidated damages are reasonable and not penalties individually nor cumulatively.

The liquidated damages for failure to achieve Substantial Completion by the required date shall be \$200 per calendar day. After the required Final Completion date, the liquidated damages for failure to achieve Final Completion shall be \$100 per calendar day.

Liquidated damages assessed by the Port will be deducted from monies due to the Contractor, or from monies that will become due to the Contractor. The liquidated damages, as specified and calculated herein, shall be levied, cumulatively if applicable, for each and every calendar day that Substantial Completion and/or Final Completion of the Work is delayed beyond the required completion dates, or the completion dates modified by the Port for extensions of the Contract Time.

4.0 CONTRACT PRICE

In accordance with the Contractor's Bid dated _____, the Port shall pay the Contractor in current funds for the Contractor's performance of the Contract, the Contract Price of _____ Dollars (\$ _____), subject to additions and deductions as provided in the Contract Documents. State and local sales tax is not included in the Contract Price, but will be due and paid by the Port with each progress payment.

6.0 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in the Contract Documents.

This Agreement is entered into as of the day and year first written above:

CONTRACTOR

PORT OF TACOMA

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Execution _____
Date: _____

END OF SECTION

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PERFORMANCE BOND # _____

CONTRACTOR (NAME AND ADDRESS)

SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)

OWNER (NAME AND ADDRESS)

PORT OF TACOMA
P.O. BOX 1837
TACOMA, WA 98401-1837

AGENT OR BROKER (FOR INFORMATION ONLY)

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, in the amount of _____ Dollars (\$ _____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for Building 326 Storefront Window Replacement, Partition Bracing and Isolated Siding Painting, Project No. 101532.01/Contract No. 071543, a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, all alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed and issued pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

FURTHER:

- A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.
- C. Whenever Contractor has been declared by the Port to be in default, and the Port has given Surety notice of the Port's determination of such default, Surety shall promptly (in no event more than fifteen (15) days following receipt of such notice) advise the Port of its intended action to:
 1. Remedy the default within fifteen (15) days following its advice to the Port as set forth above, or

2. Assume within fifteen (15) days, following its advice to the Port as set forth above, completion of the Contract in accordance with the Contract Documents and become entitled to payment of the balance of the Contract Sum, or
 3. Pay the Port upon completion of the Contract, in cash, the cost of completion together with all other reasonable costs and expenses incurred by the Port as a result of the Contractor's default, including but not limited to, those reasonable costs and expenses incurred by the Port in its efforts to mitigate its losses, which may include, but are not limited to, attorney's fees and efforts to complete the Work prior to the Surety exercising the options available to it as set forth herein.
- D. If the Port shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment, shall pay all costs and attorney's fees incurred by the Port in enforcement of its rights hereunder. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.
- E. No right or action shall accrue on this bond to, or for the use of, any person or corporation other than the Port of Tacoma.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

CONTRACTOR

Signature

Signature

Printed Name and Title

Printed Name and Title

Power of Attorney attached.

END OF SECTION

LABOR AND MATERIAL PAYMENT BOND # _____

CONTRACTOR (NAME AND ADDRESS)

SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)

OWNER (NAME AND ADDRESS)

PORT OF TACOMA
P.O. BOX 1837
TACOMA, WA 98401-1837

AGENT OR BROKER (FOR INFORMATION ONLY)

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, and all others entitled to recovery hereunder, in the amount of _____ Dollars (\$ _____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for Building 326 Storefront Window Replacement, Partition Bracing and Isolated Siding Painting, Project No. 101532.01/Contract No. 071543, a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly make payment to all claimants, as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and shall indemnify and save the Port harmless from all cost and damage by reason of Contractor's default, then this obligation shall be null and void; otherwise, it shall remain in full force and effect, subject to the following conditions.

- A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.

- C. Surety hereby agrees that every person protected under the provisions of RCW 39.08.010 who has not been paid as provided under the Contract, and pursuant to RCW 39.08.010, less any amounts withheld pursuant to statute, and less retainage withheld pursuant to RCW 60.28, after the expiration of a period of thirty (30) days after the date on which the completion of the Contract in accordance with RCW 39.08, may sue on this bond, prosecute the suit to final judgment as may be due claimant, and have execution thereon including recovery of reasonable costs and attorney's fees as provided by RCW 39.08. The Port shall not be liable for the payment of any costs or expenses of any such suit.
- D. No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the Port, and where required, the Contractor, in accordance with RCW 39.08.030.
- E. The amount of this bond shall be reduced by, and to the extent of, any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.
- F. If any Claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the Port as a result of such suit. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

CONTRACTOR

Signature

Signature

Printed Name and Title

Printed Name and Title

Power of Attorney attached.

END OF SECTION

BOND NO.: _____

PROJECT TITLE: Building 326 Storefront Window
Replacement, Partition Bracing and Isolated Siding Painting

PROJECT NO.: 101532.01

CONTRACT NO.: 071543

KNOW ALL MEN BY THESE PRESENTS: That we, _____
_____ a corporation existing under and by virtue of the laws of the State of
Washington and authorized to do business in the State of Washington, as Principal, and
_____, a corporation organized and existing under the
laws of the State of _____ and authorized to transact the business of
surety in the State of Washington, as Surety, are jointly and severally held and bound unto the PORT OF
TACOMA, hereinafter called Port, as Obligee, and are similarly held and bound unto the beneficiaries of
the trust fund created by RCW 60.28 as their heirs, executors, administrators, successors, and assigns in
the penal sum of _____ (\$_____) plus five (5) percent of any increases in the Contract Price that have occurred or may occur, due to
change orders, increases in the quantities, or the addition of any new item of work.

WHEREAS, on the _____ day of _____, the said Principal herein executed Contract
No. 071543 with the Port for Building 326 Storefront Window Replacement, Partition Bracing and
Isolated Siding Painting, Project No. 101532.01.

WHEREAS, said Contract and RCW 60.28 require the Port to withhold from the Principal the sum of five
(5) percent from monies earned by the Principal on estimates during the progress of the work, hereinafter
referred to as earned retained funds.

WHEREAS, the Principal has requested that the Port accept a bond in lieu of earned retained funds as
allowed under RCW 60.28.

NOW THEREFORE, this obligation is such that the Surety, its successors, and assigns are held and
bound unto the Port and unto all beneficiaries of the trust fund created by RCW 60.28.011(1) in the
aforesaid sum. This bond, including any proceeds therefrom, is subject to all claims and liens and in the
same manner and priority as set forth for retained percentages in RCW 60.28. The condition of this
obligation is also that if the Principal shall satisfy all payment obligations to persons who may lawfully
claim under the trust fund created pursuant to RCW 60.28, to the Port, and indemnify and hold the Port
harmless from any and all loss, costs, and damages that the Port may sustain by release of said
retainage to Principal, then this obligation shall be null and void, provided the Surety is notified by the
Port that the requirements of RCW 60.28.021 have been satisfied and the obligation is duly released by
the Port.

IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable under this obligation as
Principal. The Surety will not be discharged or released from liability for any act, omission, or defenses of
any kind or nature that would not also discharge the Principal.

IT IS HEREBY FURTHER DECLARED AND AGREED that this obligation shall be binding upon and inure to the benefit of the Principal, the Surety, the Port, the beneficiaries of the trust fund created by RCW 60.28 and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, said Principal and said Surety have caused these presents to be duly signed and sealed this _____ day of _____, 20____.

By: _____
Principal

Address: _____

City/ST/Zip: _____

Phone: _____

Surety Name: _____

By: _____
Attorney-In-Fact

Address: _____

City/ST/Zip: _____

Phone: _____

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, and be authorized to transact business in the State of Washington.

END OF SECTION

TABLE OF CONTENTS		PAGE
ARTICLE 1 - THE CONTRACT DOCUMENTS		3
1.01 GENERAL		3
1.02 DEFINITIONS		3
1.03 INTENT OF THE CONTRACT DOCUMENTS		4
1.04 CORRELATION OF THE CONTRACT DOCUMENTS		4
1.05 OWNERSHIP OF THE CONTRACT DOCUMENTS		5
ARTICLE 2 - PORT OF TACOMA		5
2.01 AUTHORITY OF THE ENGINEER		5
2.02 ADMINISTRATION OF THE CONTRACT		5
2.03 INFORMATION PROVIDED BY THE PORT		6
2.04 CONTRACTOR REVIEW OF PROJECT INFORMATION		6
2.05 PORT'S RIGHT TO REJECT, STOP, AND/OR CARRY-OUT THE WORK		6
2.06 SEPARATE CONTRACTORS		7
2.07 OFFICERS AND EMPLOYEES OF THE PORT		7
ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES		7
3.01 DUTY TO PERFORM THE ENTIRE WORK		7
3.02 OBSERVED ERRORS, INCONSISTENCIES, OMISSIONS OR VARIANCES IN THE CONTRACT DOCUMENTS		7
3.03 SUPERVISION AND RESPONSIBILITY FOR SUBCONTRACTORS		8
3.04 MATERIALS AND EQUIPMENT		8
3.05 CONTRACTOR WARRANTIES		8
3.06 REQUIRED WAGES		9
3.07 STATE AND LOCAL TAXES		9
3.08 PERMITS, LICENSES, FEES, AND ROYALTIES		10
3.09 SAFETY		10
3.10 CORRECTION OF WORK		10
3.11 UNCOVERING OF WORK		11
3.12 RELOCATION OF UTILITIES		11
3.13 LABOR		12
3.14 INDEMNIFICATION		12
3.15 WAIVER OF CONSEQUENTIAL DAMAGES		13
ARTICLE 4 - SUBCONTRACTORS AND SUPPLIERS		13
4.01 RESPONSIBILITY FOR ACTIONS OF SUBCONTRACTORS AND SUPPLIERS		13
4.02 AWARD OF CONTRACTS TO SUBCONTRACTORS AND SUPPLIERS		13
4.03 SUBCONTRACTOR AND SUPPLIER RELATIONS		14
ARTICLE 5 - WORKFORCE AND NON-DISCRIMINATION REQUIREMENTS		15
5.01 COMPLIANCE WITH NON-DISCRIMINATION LAWS		15
5.02 MWBE, VETERAN-OWNED, AND SMALL BUSINESS ENTERPRISE PARTICIPATION ...		15
5.03 APPRENTICESHIP PARTICIPATION		15
ARTICLE 6 - CONTRACT TIME AND COMPLETION		16
6.01 CONTRACT TIME		16
6.02 PROGRESS AND COMPLETION		16
6.03 SUBSTANTIAL COMPLETION		17
6.04 COMPLETION OF PUNCH LIST		17

6.05	FINAL COMPLETION	17
6.06	FINAL ACCEPTANCE	18
6.07	PORT'S RIGHT TO USE THE PREMISES	18
ARTICLE 7 - PAYMENT		18
7.01	ALL PAYMENTS SUBJECT TO APPLICABLE LAWS AND SCHEDULE OF VALUES.....	18
7.02	APPLICATIONS FOR PAYMENT	19
7.03	PROGRESS PAYMENTS	19
7.04	PAYMENT BY CONTRACTOR TO SUBCONTRACTORS	19
7.05	FINAL PAYMENT	19
7.06	RETAINAGE	20
7.07	DISPUTED AMOUNTS	21
7.08	EFFECT OF PAYMENT	21
7.09	LIENS	21
ARTICLE 8 - CHANGES IN THE WORK		21
8.01	CHANGES IN THE WORK	21
8.02	CHANGES IN THE CONTRACT SUM	23
8.03	CHANGES IN THE CONTRACT TIME	26
8.04	RESERVATION OF RIGHTS	27
8.05	UNIT PRICES	27
ARTICLE 9 - SUSPENSION AND TERMINATION OF CONTRACT		27
9.01	PORT'S RIGHT TO SUSPEND WORK	27
9.02	TERMINATION OF CONTRACT FOR CAUSE BY THE PORT	28
9.03	TERMINATION OF CONTRACT FOR CONVENIENCE BY THE PORT	28
9.04	TERMINATION OF CONTRACT BY THE CONTRACTOR	28
9.05	SUBCONTRACT ASSIGNMENT UPON TERMINATION	29
ARTICLE 10 - BONDS		29
10.01	CONTRACTOR PERFORMANCE AND PAYMENT BONDS	29
ARTICLE 11 - DISPUTE RESOLUTION		30
11.01	NOTICE OF PROTEST AND CLAIM	30
11.02	MEDIATION	31
11.03	LITIGATION	32
ARTICLE 12 - MISCELLANEOUS		32
12.01	GENERAL	32
12.02	WAIVER	32
12.03	GOVERNING LAW	33
12.04	COMPLIANCE WITH LAW	33
12.05	ASSIGNMENT	33
12.06	TIME LIMIT ON CAUSES OF ACTION	33
12.07	SERVICE OF NOTICE	33
12.08	RECORDS	34
12.09	STATUTES	34

ARTICLE 1 - THE CONTRACT DOCUMENTS

1.01 GENERAL

- A. Contract Documents form the Contract. The Contract Documents are enumerated in the Agreement between the Port and Contractor ("Agreement"). Together, the Contract Documents form the Contract. The Contract represents the entire integrated agreement between the parties and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only in writing and only as set forth in the Contract Documents.
- B. Headings only for convenience. The titles or headings of the sections, divisions, parts, articles, paragraphs, and subparagraphs of the Contract Documents are intended only for convenience.

1.02 DEFINITIONS

- A. "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- B. "Contractor" means the person or entity contracting to perform the Work under these Contract Documents. The term Contractor includes the Contractor's authorized representative for purposes of identifying obligations and responsibilities under the Contract Documents, including the ability to receive notice and direction from the Port.
- C. "Day" means a calendar day unless otherwise specifically designated.
- D. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, including plans, elevations, sections, details, and diagrams.
- E. "Engineer" is the Port employee generally tasked with administering the Project on the Port's behalf and the person with overall responsibility for managing, for the Port, the Project scope, budget, and schedule. To the extent empowered, the Engineer may delegate to others at the Port (such as a Project Manager or Inspector) the responsibility for performing delegated responsibilities of the Engineer's under this Contract.
- F. "Port" means the Port of Tacoma. The Port will designate in writing a representative (usually the Engineer) who shall have the authority to act on the Port's behalf related to the Project. The "Port" does not include staff, maintenance, or safety workers, or other Port employees or consultants that may contact the Contractor or be present at the Project site.
- G. "Project" is identified in the Agreement and is the total construction to be performed by or through the Port, of which the Work performed under the Contract Documents may be only a part.
- H. "Specifications" are those portions of the Contract Documents that specify the written requirements for materials, equipment, systems, standards, and workmanship for the Work and for the performance of related services.
- I. "Subcontractor" means a person or entity that contracts directly with the Contractor to perform any Work under the Contract Documents. "Subcontractor of any tier" includes Subcontractors as well as any other person or entity, including suppliers, that contracts with a Subcontractor or a lower-tier Subcontractor (also referred to as "Sub-subcontractors") to perform any of the Work.

- J. "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, tools, equipment, materials, services, and incidentals necessary to complete all obligations under the Contract Documents. The Work may constitute only a part of the Project, and may interface and need to be coordinated with the work of others.

1.03 INTENT OF THE CONTRACT DOCUMENTS

- A. Intent of Contract Documents. The intent of the Contract Documents is to describe the complete Work and to include all items and information necessary for the proper execution and completion of the Work by the Contractor.
- B. Contract Documents are complementary. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.
- C. No third party contract rights. The Contract Documents shall not create a contractual relationship of any kind (1) between the Port and a Subcontractor of any tier (although the Port does not waive any third-party beneficiary rights it may otherwise have as to Subcontractors of any tier), (2) between the Contractor and the Engineer or other Port employees or consultants, or (3) between any persons or entities other than the Port and Contractor.

1.04 CORRELATION OF THE CONTRACT DOCUMENTS

- A. Precedence. In the event of a conflict or discrepancy between or among the Contract Documents, the conflict or discrepancy will be resolved by the following order of precedence: with an addendum or Change Order having precedence over an earlier document, and computed dimensions having precedence over scaled dimensions, and large scale drawings take precedence over small scale drawings:
1. The signed Agreement
 - a. Supplemental Conditions
 - b. Division 00 General Conditions
 - c. Division 01 General Requirements of Specifications
 - d. All other Specifications, including all remaining divisions, material and system schedules and attachments, and Drawings
 - e. All other sections in Division 00 not specifically identified herein by Section
- B. Inconsistency between or among Contract Documents. If there is any inconsistency between the Drawings, schedules, or Specifications, or any attachments, the Contractor will make an inquiry to the Engineer to determine how to proceed, and, unless otherwise directed, the Contractor will provide the better quality or greater quantity of any work or materials, as reasonably interpreted by the Port, at no change in the Contract Sum or Contract Time. Thus, if Work is shown on Drawings, but not contained in Specifications or schedules, or contained in Specifications or schedules, but not shown on the Drawings, the Work as shown or contained will be provided at no change in the Contract Sum or Contract Time, according to Specifications or Drawings to be issued by the Port.
- C. Inconsistency with law. In the event of a conflict between the Contract Documents and applicable laws, codes, ordinances, regulations, or orders of governmental authorities having jurisdiction over the Work, or in the event of any conflict between such laws, the most stringent requirements govern.

- D. Organization of Contract Documents. The organization of the Specifications and Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of the Work to be performed. The Port assumes no responsibility for the division and proper coordination of Work between particular Subcontractors.
- E. Bid quantities are estimates only. Any "bid quantities" set forth in the Contract Documents are estimates only. The Port does not warrant that the actual amount of Work will correspond to any estimates. The basis of payment will be the actual quantities performed in accordance with the Contract Documents.

1.05 OWNERSHIP OF THE CONTRACT DOCUMENTS

- A. Port owns all Contract Documents. All Drawings, Specifications, and other Contract Documents furnished to the Contractor are Port property, and the Port retains all intellectual property rights, including copyrights. The Contract Documents are to be used only with respect to the Project.

ARTICLE 2 - PORT OF TACOMA

2.01 AUTHORITY OF THE ENGINEER

- A. Engineer will be Port's representative. The Engineer or the Engineer's designee will be the Port's representative during the Project and will administer the Project on the Port's behalf.
- B. Engineer may enforce all obligations. The Engineer has the authority to enforce all requirements imposed on the Contractor by the Contract Documents.
- C. Only Engineer is agent of Port. Other than the Engineer, no other Port employee or consultant is an agent of the Port, and none are authorized to agree on behalf of the Port to changes in the Contract Sum or Contract Time, nor to waive provisions of the Contract Documents, nor to direct the Contractor to take actions that change the Contract Sum or Contract Time, nor to accept notice of protests or claims on behalf of the Port.

2.02 ADMINISTRATION OF THE CONTRACT

- A. Port will administer Contract. The Port will provide administration of the Contract through the Engineer or the Engineer's designee. All communications with the Port or its consultants related to the Contract will be through the designated representative.
- B. Port not responsible for means and methods. The Port is not responsible for, and will have no control or charge of, the means, methods, techniques, sequences, or procedures of construction, or for safety precautions or programs incidental thereto, because these are the sole responsibility of the Contractor. If the Port makes any suggestion of means, methods, techniques, sequences, or procedures, the Contractor will exercise its independent judgment in deciding whether to adopt the suggestion, except as otherwise provided in the Contract Documents.
- C. Port not responsible for acts or omissions of Contractor or Subcontractors. The Port is not responsible for, and will have no control or charge of, the acts or omissions of the Contractor, Subcontractors of any tier, suppliers, or any of their agents or employees, or any other persons performing a portion of the Work.
- D. Port not responsible for the Work. The Port is not responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The presence of the Engineer or others at the Project site at any time does not relieve the Contractor from its responsibility for non-conforming Work.

- E. Port will have access to the Work. The Port and its representatives will at all times have access to the Work in progress, and the Contractor will provide proper facilities for such access and for inspection.

2.03 INFORMATION PROVIDED BY THE PORT

- A. Port to furnish information with reasonable promptness. The Port shall furnish information and services required of the Port by the Contract Documents with reasonable promptness.
- B. Subsurface investigation. The Port may have undertaken a limited investigation of the soil and other subsurface conditions at the Project site for design purposes only. The results of these investigations will be available for the convenience of the Contractor, but they are not Contract Documents. There is no warranty or guarantee, express or implied, that the conditions indicated are representative of those existing at the site or that unforeseen developments may not occur. The Contractor is solely responsible for interpreting the information.

2.04 CONTRACTOR REVIEW OF PROJECT INFORMATION

- A. Contractor to familiarize itself with site and conditions of Work. Prior to executing the Contract, the Contractor shall visit the site, become generally familiar with local conditions under which the Work is to be performed, and correlate personal observations with the requirements of the Contract Documents and all information provided with the Bid Documents. By signing the Contract, the Contractor confirms that the Contract Sum is reasonable compensation for the Work; that the Contract Time is adequate; that it has carefully examined the Contract Documents and the Project site; and that it has satisfied itself as to the nature, location, and character of the Work, the labor, materials, equipment, and other items required and all other requirements of the Contract Documents. The Contractor's failure fully to acquaint itself with any such condition does not relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents, within the Contract Time, and for the Contract Sum.
- B. Contractor to review Contract Documents. Because the Contract Documents are complementary, the Contractor will, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications, and other Contract Documents, as well as all information furnished by the Port.
- C. Contractor to confirm field conditions. Before starting each portion of the Work, the Contractor shall take field measurements of and verify any existing conditions, including all Work in place, and all general reference points; shall observe any conditions at the site affecting the Contractor; and shall carefully compare field measurements, conditions and other information known to the Contractor with the Contract Documents.

2.05 PORT'S RIGHT TO REJECT, STOP, AND/OR CARRY-OUT THE WORK

- A. Port may reject Work. The Port has the authority, but not the obligation, to reject work, materials, and equipment that is defective or that otherwise does not conform to the Contract Documents, and to decide questions concerning the Contract Documents. However, the failure to so reject, or the presence of the Port at the site, shall not be construed as assurance that the Work is acceptable or being completed in compliance with the Contract Documents.
- B. Port may stop Work. If the Contractor fails to correct Work that does not comply with the requirements of the Contract Documents, or repeatedly or materially fails to properly carry out the Work, the Port may issue an order to stop all or a portion of the Work until the cause for the order has been eliminated. The Port's right to stop the Work shall not impose a duty on the Port to exercise this right for the benefit of the Contractor or any third party.

- C. Port may carry-out Work. If the Contractor fails to perform the Work properly, fails to perform any provision of this Contract, or fails to maintain the Baseline Project Schedule, or if the Port reasonably concludes that the Work will not be completed in the specified manner or within the Contract Time, then the Port may, after three (3) days' written notice to the Contractor and without prejudice to any other remedy the Port may have, perform itself or have performed any or all of the Work and may deduct the cost thereof from any payment then or later due the Contractor.

2.06 SEPARATE CONTRACTORS

- A. Port may engage separate contractors or perform work with its own forces. The Port may contract with other contractors ("Separate Contractor") in connection with the Project or perform work with its own forces. The Contractor shall coordinate and cooperate with any Port forces or Separate Contractors, as applicable. The Contractor shall provide reasonable opportunity for the introduction and storage of materials and the execution of work by others.
- B. Contractor to inspect work of others. If any part of the Contractor's Work depends on the work of the Port or any Separate Contractor, the Contractor shall inspect and promptly report to the Port, in writing, any defects that impact the Contractor. Failure of the Contractor to so inspect and report defects in writing shall constitute an acceptance by Contractor of the work of the Port or Separate Contractor.
- C. Contractor to resolve claims of others. Should the Contractor, or any of its Subcontractors of any tier, cause damage of any kind, including but not limited to delay, to any Separate Contractor, the Contractor shall promptly, and using its best efforts, settle or otherwise resolve the dispute with the Separate Contractor. The Contractor shall also promptly remedy damage caused to completed or partially completed construction.

2.07 OFFICERS AND EMPLOYEES OF THE PORT

- A. No personal liability. Officers, employees, and representatives of the Port, including the Commissioners, acting within the scope of their employment, shall not be personally liable to Contractor for any acts or omissions arising out of the Project.

ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES

3.01 DUTY TO PERFORM THE ENTIRE WORK

- A. Contractor must perform entire Work in accordance with Contract Documents. The Contractor shall perform the entire Work required by the Contract in accordance with the Contract Documents. Unless otherwise specifically provided, the Contractor shall provide and pay for all labor, tools, equipment, materials, electricity, power, water, other utilities, transportation, and other facilities necessary for the execution and completion of the Work.
- B. Contractor shall be independent contractor. The Contractor shall be, and operate as, an independent contractor in the performance of the Work. The Contractor is not authorized to enter into any agreements or undertakings for, or on behalf of, the Port and is not an agent or employee of the Port.

3.02 OBSERVED ERRORS, INCONSISTENCIES, OMISSIONS, OR VARIANCES IN THE CONTRACT DOCUMENTS

- A. Contractor to notify Port of any discrepancy. The Contractor's obligations to review and carefully study the Contract Documents and field conditions are for the purpose of facilitating coordination and construction. If the Contractor at any time observes that the Contract Documents, including Drawings and Specifications, vary from the conditions of the Project site, are in error, or omit any necessary detail, the Contractor shall promptly notify the Engineer in writing through a Request for Information. Any Work done after such observation, until authorized by the Engineer, shall be at Contractor's risk. The Contractor shall also promptly report to the Engineer any observed error, inconsistency, omission, or variance with applicable laws through a Request for Information. If the Contractor fails either to carefully study and compare the Contract Documents, or to promptly report any observed error, inconsistency, omission, or variance, the Contractor shall assume full responsibility and shall bear all costs, liabilities, and damages attributable to the error, inconsistency, omission, or variance.
- B. Requests for Information. The Contractor shall submit Requests for Information concerning the Contract Documents by following the procedure and using such form as the Port may require. The Contractor shall minimize Requests for Information by thoroughly studying the Contract Documents and reviewing all Subcontractor requests. The Contractor shall allow adequate time in its planning and scheduling for a response from the Port to a Request for Information.
- C. Port may provide information to supplement Drawings and Specifications. Minor items of work or detail that are omitted from the Drawings and Specifications, but inferable from the information presented and normally provided by accepted good practice, shall be provided and/or performed by the Contractor as part of the Contract Sum and within the Contract Time. Similarly, the Engineer may furnish to the Contractor additional Drawings and clarifications, consistent with the Contract Documents, as necessary to detail and illustrate the Work. The Contractor shall conform its Work to such additional Drawings and clarifications at no increase in the Contract Sum or Contract Time.

3.03 SUPERVISION AND RESPONSIBILITY FOR SUBCONTRACTORS

- A. Contractor responsible for Work and workers. The Contractor shall have complete control of the means, methods, techniques, sequences, or procedures related to the Work, and for all safety precautions or programs. The Contractor shall have complete control over, and responsibility for, all personnel performing the Work. The Contractor is also responsible for the acts and omissions of the Contractor's principals, employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors of any tier.
- B. Contractor to supervise the Work. The Contractor shall continuously supervise and direct the Work using competent and skilled personnel and the Contractor's best skill and attention.
- C. Contractor to enforce discipline and good order. The Contractor shall enforce strict discipline and good order among all workers on the Project, and shall not employ any unfit person or anyone not skilled in the work to which they are assigned. Incompetent, careless, or negligent workers shall immediately be removed from the Work. The Port may, but is not obligated to, require the Contractor to remove from the Work, at no change in the Contract Sum or Contract Time, anyone whom the Port considers objectionable.

3.04 MATERIALS AND EQUIPMENT

- A. Material and equipment to be new. All materials and equipment to be incorporated into the Work shall be new, unless specifically provided otherwise in the Contract Documents. The Contractor shall, if required in writing by the Port, furnish satisfactory evidence regarding the kind and quality of any materials, identify the source, and warrant compliance with the Contract Documents. The Contractor shall ensure that all materials and equipment are protected, kept dry, and stored under cover in a manner to protect such materials and equipment.

- B. Material and equipment shall conform to manufacturer instructions. All materials and equipment shall conform, and shall be applied, installed, used, maintained, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processor, unless otherwise specifically provided by the Engineer.

3.05 CONTRACTOR WARRANTIES

- A. Work will be of good quality and performed in workmanlike manner. In addition to any specific warranties set forth in the Contract Documents, the Contractor warrants that the Work, including all materials and equipment furnished under the Contract, will be of good quality and new, will be performed in a skillful and workmanlike manner, and will conform to the requirements of the Contract Documents. Any Work not conforming to this warranty, including unapproved or unauthorized substitutions, shall be considered defective.
- B. Work will be free from defects. The Contractor warrants that the Work will be free from defects for a period of one (1) year from the date of Substantial Completion of the Project.
- C. Contractor to collect and deliver warranties to Port. The Contractor shall collect and deliver to the Port any written warranties required by the Contract Documents. These warranties shall be obtained and enforced by the Contractor for the benefit of the Port without the necessity of separate assignment. These warranties shall extend to the Port all rights, claims, benefits, and interests that the Contractor may have under express or implied warranties or guarantees against a Subcontractor of any tier, supplier, or manufacturer for defective or non-conforming Work. Warranty provisions that purport to limit or alter the Port's rights under the Contract Documents, or the laws of the State of Washington, are null and void.
- D. General requirements. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance, and final payment.

3.06 REQUIRED WAGES

- A. Contractor will pay required wages. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project. See Specification Section 00 73 46.
- B. The Contractor shall defend (at Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct or indirect, and including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses of litigation, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or Chapter 51 RCW ("Industrial Insurance").

3.07 STATE AND LOCAL TAXES

- A. Contractor will pay taxes on consumables. The Contractor will pay the retail sales tax on all consumables used during performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Contract Sum.
- B. Port will pay taxes on the Contract Sum. The Port will pay state and local retail sales tax on the Contract Sum with each progress payment, and on final payment, for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local taxing authority. Rule 170: WAC 458-20-170.

- C. Direct all tax questions to the Department of Revenue. The Contractor should direct all questions concerning taxes on any portion of the Work to the State of Washington Department of Revenue or to the local taxing authority.
- D. State Sales Tax - Rule 171: WAC 458-20-171. For work performed related to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used, primarily, for foot or vehicular traffic, the Contractor shall include Washington State Retail Sales Taxes in the various schedule prices, or other contract amounts, including those that the Contractor pays on the purchase of materials, equipment, or supplies used or consumed in doing the Work.
 - 1. The bid form will indicate which bid items are subject to Rule 171. Any such identification by the Port is not binding upon the Department of Revenue.

3.08 PERMITS, LICENSES, FEES, AND ROYALTIES

- A. Contractor to provide and pay for permits unless otherwise specified. Unless otherwise specified, the Contractor shall procure and pay for all permits, licenses, and governmental inspection fees necessary or incidental to the performance of the Work. All costs related to these permits, licenses, and inspections shall be included in the Contract Sum. Any action taken by the Port to assist the Contractor in obtaining permits or licenses shall not relieve the Contractor of its sole responsibility to obtain and pay for permits, licenses, and inspections as part of the Contract Sum.
- B. Contractor's obligations when permit must be in Port's name. When applicable law or agency requires a permit to be issued to a public agency, the Port will support the Contractor's request for the permit and accept the permit in the Port's name, if:
 - 1. The Contractor takes all necessary steps required for the permit to be issued;
 - 2. The permit applies to Work performed in connection with the Project; and
 - 3. The Contractor agrees in writing to abide by all requirements of the permit and to defend and hold harmless the Port from any liability in connection with the permit.
- C. Contractor to pay royalties. The Contractor shall pay all royalties and license fees required for the Work unless otherwise specified in the Contract Documents.

3.09 SAFETY

- A. Contractor solely responsible for safety. The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work and the performance of the Contract.
- B. Port not responsible for safety. The Port may identify safety concerns to the Contractor; however, no action or inaction of the Port or any third party relating to safety will: (1) relieve the Contractor of its sole and complete responsibility for safety and sole liability for any consequences, (2) impose any obligation on the Port or a third party to inspect or review the Contractor's safety program or precautions, (3) impose any continuing obligation on the Port or a third party to ensure the Contractor performs the Work safely, or (4) affect the Contractor's responsibility for the protection of property, workers, and the general public.
- C. Contractor to maintain a safe Work site. The Project site may be occupied during performance of the Work. The safety of these site occupants is of paramount importance to the Port. The Contractor shall maintain the Work site and perform the Work in a safe manner and in accordance with the Washington Industrial Safety and Health Act (WISHA) and all other applicable safety laws, rules, and regulations. This requirement shall apply continuously and not be limited to working hours.
- D. Contractor to protect Work site and adjacent property until Final Completion. The Contractor shall continuously protect the Work and adjacent property from damage. At all times until Final Completion, the Contractor shall be responsible for, and protect from damage, weather, deterioration, theft, and vandalism, the Work and all materials, equipment, tools, and other items incorporated or to be incorporated in the Work, and shall repair any damage, injury, or loss.

3.10 CORRECTION OF WORK

- A. Contractor to correct defective Work. The Contractor shall, at no cost to the Port, promptly correct Work that is defective or that otherwise fails to conform to the requirements of the Contract Documents. Such Work shall be corrected, whether before or after Substantial Completion, and even if it was previously inspected or observed by the Port.

- B. One-year correction period. The Contractor shall correct all defects in the Work appearing within one (1) year of Substantial Completion or within any longer period prescribed by law or by the Contract Documents. The Contractor shall initiate remedial action within fourteen (14) days of receipt of notice from the Port and shall complete remedial work within a reasonable time. Work corrected by the Contractor shall be subject to the provisions of this Section 3.10 for an additional one-year period following the Port's acceptance of the corrected Work.
- C. Contractor responsible for defects and failures to correct. The Contractor shall be responsible for any expenses incurred by the Port resulting from defects in the Work. If the Contractor refuses or neglects to correct the defects, or does not timely accomplish corrections, the Port may correct the Work and charge the Contractor the cost of the corrections. If damage or loss of service may result from a delay in correction, the corrections may be made by the Port and reimbursed by the Contractor.
- D. Port may accept defective work. The Port may, at its sole option, elect to retain defective or nonconforming Work. In such a case, the Port shall reduce the Contract Sum by a reasonable amount to account for the defect or non-conformance.
- E. No period of limitation established. Nothing contained in this Section 3.10 establishes a period of limitation with respect to any obligations under the Contract Documents or law. The establishment of the one (1) year correction period relates only to the specific obligation of the Contractor to correct defective or non-conforming Work.

3.11 UNCOVERING OF WORK

- A. Contractor to uncover work covered prior to inspection. If any portion of the Work is covered prior to inspection and approval, the Contractor shall, at its expense, uncover or remove the Work for inspection by the Port or others, and replace the Work to the standard required by the Contract Documents.
- B. Contractor to uncover work at Port's request. After initial inspection and observation, the Port may order a reexamination of Work, and the Work must be uncovered by the Contractor. If the uncovered Work complies with the Contract Documents, the Port shall pay the cost of reexamination and replacement. If the Work is found not to comply with the Contract Documents, the Contractor shall pay the cost of replacement, unless the Contractor demonstrates that it did not cause the defect in the Work.

3.12 RELOCATION OF UTILITIES

- A. Contractor should assume underground utilities are in approximate locations. The Contractor should assume that the locations of any underground or hidden utilities, underground tanks, and plumbing or electrical runs indicated in surveys or the Contract Documents are shown in approximate locations. The accuracy of this information is not guaranteed by the Port and shall be verified by the Contractor. The Contractor shall comply with RCW 19.122.030 and utilize a utility locator service to locate utilities on Port property. The Contractor shall bear the risk of loss if any of its Work directly or indirectly damages or interrupts any utility service or causes or contributes to damages of any nature.
- B. Utility relocation or removal. Where relocation or removal of utilities is necessary or required, it shall be performed at the Contractor's sole expense, unless the Contract Documents specify otherwise. If a utility owner is identified as being responsible for relocating or removing utilities, the work will be accomplished at the utility owner's convenience, either during, or in advance of, construction. Unless otherwise specified, it shall be the Contractor's sole responsibility to coordinate, schedule, and pay for work performed by a utility owner.

- C. Contractor to notify Port of unknown utilities. If the Contractor discovers the presence of any unknown utilities, it shall immediately notify the Engineer in writing.

3.13 LABOR

- A. Contractor responsible for labor peace. The Contractor is responsible for labor peace relating to the Work and shall cooperate in maintaining Project-wide labor harmony. The Contractor shall use its best efforts as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes, or strikes.
- B. Contractor to minimize impact of labor disputes. The Contractor will take all necessary steps to prevent labor disputes from disrupting or otherwise interfering with access to Port property. If a labor dispute disrupts the progress of the Work or interferes with access, the Contractor shall promptly and expeditiously take all necessary action to eliminate or minimize the disruption or interference.

3.14 INDEMNIFICATION

- A. Duty to defend, indemnify, and hold harmless. To the fullest extent permitted by law and subject to this Section 3.14, the Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port and the Northwest Seaport Alliance, including their respective Commissions, officers, managers, and employees, the Engineer, any consultants, and the agents and employees, successors and assigns of any of them (the "Indemnified Parties") from and against claims, damages, lawsuits, losses (including loss of use), disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct and indirect or consequential, including but not limited to, consultants' fees, and attorneys' fees incurred on such claims and in proving the right to indemnification ("Claims"), arising out of, or resulting from, the acts or omissions of the Contractor, a Subcontractor of any tier, their agents, and anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable (individually and collectively, the "Indemnitor").
- B. Duty to defend, indemnify, and hold harmless for sole negligence. The Contractor will fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence or willful misconduct of the Indemnitor.
- C. Duty to defend, indemnify, and hold harmless for concurrent negligence. Where Claims arise from the concurrent negligence of (1) the Port; and (2) the Indemnitor, the Contractor's obligations to indemnify and defend the Indemnified Parties under this Section 3.14 shall be effective only to the extent of the Indemnitor's negligence.
- D. Duty to indemnify not limited by workers' compensation or similar employee benefit acts. In claims against any of the Indemnified Parties by an employee of the Contractor, a Subcontractor of any tier, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under this Section 3.14 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable under workers' compensation acts, disability benefit acts, or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Indemnified Parties under Title 51 RCW, "Industrial Insurance."
- E. Intellectual property indemnification. The Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Indemnified Parties harmless for Claims for infringement by the Contractor of copyrights or patent rights arising out of, or relating to, the Project.

- F. Labor peace indemnification. If the Contractor fails to satisfy its labor peace obligations under the Contract, the Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Indemnified Parties for Claims brought against the Port by third parties (including but not limited to lessees, tenants, contractors, customers, licensees, and invitees of the Port) for injunctive relief or monetary loss.
- G. Cyber risk indemnification. Contractor shall defend, indemnify, and hold harmless the Indemnified Parties from and against any liability, expense, fines, penalties, cost, demand, or other obligation, resulting from or out of any cyber-related risk that includes theft, loss or misuse of data, release of private information as result of a network breach, penetration, compromise, or loss of IT systems control.
- H. Joinder. The Contractor agrees to being added by the Port as a party to any arbitration or litigation with third parties in which the Port alleges indemnification or seeks contribution from the Indemnitor. The Contractor shall cause each of its Subcontractors of any tier to similarly stipulate in their subcontracts; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier.
- I. Other. To the extent that any portion of this Section 3.14 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect. The obligations of the Contractor under this Section 3.14 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity which would otherwise exist. To the extent the wording of this Section 3.14 would reduce or eliminate an available insurance coverage, it shall be considered modified to the extent necessary so that the insurance coverage is not affected. This Section 3.14 shall survive completion, acceptance, final payment, and termination of the Contract.

3.15 WAIVER OF CONSEQUENTIAL DAMAGES

- A. Mutual waiver of consequential damages. The Contractor and Port waive claims against each other for consequential damages arising out of, or relating to, this Contract. This mutual waiver includes, but is not limited to: (1) damages incurred by the Port for rental expenses, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons, and (2) damages incurred by the Contractor for principal and home office overhead and expenses including, but not limited to, the compensation of personnel stationed there, for losses of financing, business, and reputation, for losses on other projects, for loss of profit, and for interest or financing costs. This mutual waiver includes, but is not limited to, all consequential damages due to either party's termination.
- B. Limitation. Nothing contained in this Section 3.15; however, shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents, to preclude damages specified in the Agreement, or to affect the Contractor's obligation to indemnify the Port for direct, indirect, or consequential damages alleged by a third party.

ARTICLE 4 - SUBCONTRACTORS AND SUPPLIERS

4.01 RESPONSIBILITY FOR ACTIONS OF SUBCONTRACTORS AND SUPPLIERS.

- A. Contractor responsible for Subcontractors. The Contractor is fully responsible to the Port for the acts and omissions of its Subcontractors of any tier and all persons either directly or indirectly employed by the Contractor or its Subcontractors.

4.02 AWARD OF CONTRACTS TO SUBCONTRACTORS AND SUPPLIERS

- A. Contractor to provide proposed Subcontractor information. The Contractor, within ten (10) days after the Port's notice of award of the Contract, shall provide the Engineer with the names of the persons or entities proposed to perform each of the principal portions of the Work (i.e., either a Subcontractor listed in a bid or proposal or a Subcontractor performing Work valued at least ten percent (10%) of the Contract Sum) and the proprietary names, and the suppliers of, the principal items or systems of materials and equipment proposed for the Work. No progress payment will become due until after this information has been furnished.
- B. Port to respond promptly with objections. The Port may respond promptly to the Contractor in writing stating: (1) whether the Port has reasonable objection to any proposed person or entity, or (2) whether the Port requires additional time for review. If the Port makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.
- C. Reasonable objection defined. "Reasonable objection" as used in this Section 4.02 includes, but is not limited to: (1) a proposed Subcontractor of any tier different from the entity listed with the bid, (2) lack of "responsibility" of the proposed Subcontractor, as defined by Washington law and the Bidding Documents, or lack of qualification or responsibility of the proposed Subcontractor based on the Contract or Bidding Documents, or (3) failure of the Subcontractor to perform satisfactorily in the Port's opinion (such as causing a material delay or submitting a claim that the Port considers inappropriate) on one or more projects for the Port within five (5) years of the bid date.
- D. No substitution allowed without permission. The Contractor shall not substitute a Subcontractor, person, or organization without the Engineer's written consent.

4.03 SUBCONTRACTOR AND SUPPLIER RELATIONS

- A. Contractor to schedule, supervise, and coordinate Subcontractors. The Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors of any tier, including suppliers. The Contractor shall ensure that appropriate Subcontractors coordinate the Work of lower-tier Subcontractors.
- B. Subcontractors to be bound to Contract Documents. By appropriate agreement, the Contractor shall require each Subcontractor and supplier to be bound to the terms of the Contract Documents and to assume toward the Contractor, to the extent of their Work, all of the obligations that the Contractor assumes toward the Port under the Contract Documents. Each subcontract shall preserve and protect the rights of the Port and shall allow to the Subcontractor, unless specifically provided in the subcontract, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Port. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with lower-tier Subcontractors.
- C. Contractor to correct deficiencies in Subcontractor performance. When a portion of the Work subcontracted by the Contractor is not being prosecuted in accordance with the Contract Documents, or if such subcontracted Work is otherwise being performed in an unsatisfactory manner in the Port's opinion, the Contractor shall, on its own initiative or upon the written request of the Port, take immediate steps to correct the deficiency or remove the non-performing party from the Project. The Contractor shall replace inadequately performing Subcontractors upon request of the Port at no change in the Contract Sum or Contract Time.
- D. Contractor to provide subcontracts. Upon request, the Contractor will provide the Port copies of written agreements between the Contractor and any Subcontractor.

ARTICLE 5 - WORKFORCE AND NON-DISCRIMINATION REQUIREMENTS

5.01 COMPLIANCE WITH NON-DISCRIMINATION LAWS

- A. Contractor to comply with non-discrimination laws. The Contractor shall fully comply with all applicable laws, regulations, and ordinances pertaining to non-discrimination.

5.02 MWBE, VETERAN-OWNED, AND SMALL BUSINESS ENTERPRISE PARTICIPATION.

- A. In accordance with the legislative findings and policies set forth in RCW 39.19, the Port encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this invitation or as a subcontractor to a Bidder. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the Contract Documents, no preference will be included in the evaluation of Bids, no minimum level of MWBE participation shall be required as a condition for receiving an award, and Bids will not be rejected or considered non-responsive on that basis. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the Contract Documents will apply.

The Port encourages participation in all of its contracts by Veteran-owned businesses (defined in RCW 43.60.010) and located at <http://www.dva.wa.gov/program/certified-veteran--and-servicemember-owned-businesses> and Small, Mini, and Micro businesses (defined in RCW 39.26.010)

5.03 APPRENTICESHIP PARTICIPATION

- A. In accordance with RCW 39.04.320, fifteen (15) percent Apprenticeship Participation is required for all projects estimated to cost one million (\$1,000,000) dollars or more.
- B. Apprentice participation, under this contract, may be counted towards the required percentage (%) only if the apprentices are from an apprenticeship program registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).
- C. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530 by phone at (360) 902-5320, or e-mail at Apprentice@lni.wa.gov, to obtain information on available apprenticeship programs.
- D. For each project that has apprentice requirements, the contractor shall submit a "Statement of Apprentice and Journeyman Participation" on forms provided by the Port of Tacoma, with every request for project payment. The Contractor shall submit consolidated and cumulative data collected by the Contractor and collected from all subcontractors by the Contractor. The data to be collected and submitted includes the following:
 - 1. Contractor name and address
 - 2. Contract number
 - 3. Project name
 - 4. Contract value
 - 5. Reporting period "Beginning Date" through "End Date"
 - 6. Name and registration number of each apprentice by contractor
 - 7. Total number of apprentices and labor hours worked by them, categorized by trade or craft.
 - 8. Total number of journeymen and labor hours worked by them, categorized by trade or craft

- 9. Cumulative combined total of apprentice and journeymen labor hours
- 10. Total percentage of apprentice hours worked
- E. No changes to the required percentage (%) of apprentice participation shall be allowed without written approval of the Port. In any request for the change, the Contractor shall clearly demonstrate a good faith effort to comply with the requirements for apprentice participation.

ARTICLE 6 - CONTRACT TIME AND COMPLETION

6.01 CONTRACT TIME

- A. Contract Time is measured from Contract execution. Unless otherwise provided in the Agreement, the Contract Time is the period of time, including authorized adjustments, specified in the Contract Documents from the date the Contract is executed to the date Substantial Completion of the Work is achieved.
- B. Commencement of the Work. The Contractor shall begin Work in accordance with the notice of award and the notice to proceed and shall complete all Work within the Contract Time. When the Contractor's signed Agreement, required insurance certificate with endorsements, bonds, and other submittals required by the notice of award have been accepted by the Port, the Port will execute the Contract and, following receipt of other required pre-work submittals, will issue a notice to proceed to allow the Contractor to mobilize and commence physical Work at the Project site, as further described in these contract documents. No Work at the Project site may commence until the Port issues a notice to proceed.
- C. Contractor shall achieve specified completion dates. The Contractor shall achieve Substantial Completion within the Contract Time and shall achieve Final Completion within the time period thereafter stated in the Contract Documents.
- D. Time is of the essence. Time limits stated in the Contract Documents, including any interim milestones, are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

6.02 PROGRESS AND COMPLETION

- A. Contractor to maintain schedule. The Contractor's sequence and method of operations, application of effort, and work force shall at all times be created and implemented to ensure the orderly, expeditious, and timely completion of the Work and performance of the Contract. The Contractor shall furnish sufficient forces and shall work such hours, including extra shifts, overtime operations, and weekend and holiday work as may be necessary to ensure completion of the Work within the Contract Time and the approved Baseline Project Schedule.
- B. Contractor to take necessary steps to meet schedule. If the Contractor fails substantially to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier, fails to meet the Baseline Project Schedule, the Contractor shall take such steps as may be necessary to immediately improve its progress by increasing the number of workers, shifts, overtime operations, or days of work, or by other means and methods, all without additional cost to the Port. If the Contractor believes that any action or inaction of the Port constitutes acceleration, the Contractor shall immediately notify the Port in writing and shall not accelerate the Work until the Port either directs the acceleration in writing or denies the constructive acceleration.
- C. Liquidated damages not exclusive. Any provisions in the Contract Documents for liquidated damages shall not preclude other damages due to breaches of Contract of the Contractor.

6.03 SUBSTANTIAL COMPLETION

- A. Substantial Completion defined. Substantial Completion is the stage in the progress of the Work, or portion or phase thereof, when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Port can fully occupy or utilize the Work, or the designated portion thereof, for its intended use, all requirements in the Contract Documents for Substantial Completion have been achieved, and all required documentation has been properly submitted to the Port in accordance with the Contract Documents. All Work, other than incidental corrective or punch list Work and final cleaning, must be completed. The fact that the Port may occupy the Work or a designated portion thereof does not indicate that Substantial Completion has occurred or that the Work is acceptable in whole or in part.
- B. Work not Substantially Complete unless Final Completion attainable. The Work is not Substantially Complete unless the Port reasonably judges that the Work can achieve Final Completion within the period of time specified in the Contract Documents.
- C. Notice of Substantial Completion. When the Work or designated portion has achieved Substantial Completion, the Port will provide a notice to establish the date of Substantial Completion. The notice shall establish responsibilities of the Port and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall finish all remaining Work. If the notice of Substantial Completion does not so state, all responsibility for the foregoing items shall remain with the Contractor until Final Completion.

6.04 COMPLETION OF PUNCH LIST

- A. Contractor shall complete punch list items prior to Final Completion. The Contractor shall cause punch list items to be completed prior to Final Completion. If, after Substantial Completion, the Contractor does not expeditiously proceed to correct punch list items or if the Port considers that the punch list items, are unlikely to be completed prior to the date established for Final Completion (or such other period of time as is specified in the Contract Documents), the Port may, upon seven (7) days' written notice to the Contractor, take over and perform some or all of the punch list items. The Port may also take over and complete any portion of the Work at any time following Substantial Completion and deduct the actual cost of performing the Work (including direct and indirect costs) from the Contract Sum. The Port's rights under this Section 6.04 are not obligations and shall not relieve the Contractor of its responsibilities under any other provisions of the Contract Documents.

6.05 FINAL COMPLETION

- A. Final Completion. Upon receipt of written notice from the Contractor that all punch list items and other Contract requirements are completed, the Contractor will notify the Port, and the Port will perform a final inspection. If the Port determines that some or all of the punch list items have not been addressed, the Contractor shall be responsible to the Port for all costs, including re-inspection fees, for any subsequent reviews to determine completion of the punch list. When the Port determines that all punch list items have been satisfactorily addressed, that the Work is acceptable under the Contract Documents, and that the Work has fully been performed, the Port will promptly notify the Contractor of Final Completion.
- B. Contractor responsible for costs if Final Completion is not timely achieved. In addition to any liquidated damages, the Contractor is liable for, and the Port may deduct from any amounts due the Contractor, all costs incurred by the Port for services performed after the contractual date of Final Completion, whether or not those services would have been performed prior to that date had Final Completion been timely achieved.

- C. Final Completion submittals. The Port is not obligated to accept the Project as complete until the Contractor has submitted all required submittals to the Port.
- D. Contractor responsible for the Work until Final Completion. The Contractor shall assume the sole risk of loss and responsibility for all Work under the Contract, and all materials to be incorporated in the Work, whether in storage or at the Project site, until Final Completion. Damage from any cause to either permanent or temporary Work, utilities, materials, equipment, existing structures, the site, or other property owned by the Port or others, shall be repaired by the Contractor to the reasonable satisfaction of the Port at no change in the Contract Sum.

6.06 FINAL ACCEPTANCE

- A. Final Acceptance. Final Acceptance is the formal action of the Port accepting the Project as complete. Public notification of Final Acceptance will be posted on the Port's external website (<http://www.portoftacoma.com/final-acceptance>).
- B. Final Acceptance not an acceptance of defective Work. Final Acceptance shall not constitute acceptance by the Port of unauthorized or defective Work, and the Port shall not be prevented from requiring the Contractor to remove, replace, repair, or dispose of unauthorized or defective Work or recovering damages due to the same.
- C. Completion of Work under RCW 60.28. Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance.

6.07 PORT'S RIGHT TO USE THE PREMISES

- A. Port has right to use and occupy Work. The Port reserves the right to occupy or use any part of the Work before or after Substantial Completion of some or all of the Work without relieving the Contractor of any of its obligations under the Contract. Such occupancy or use shall not constitute acceptance by the Port of any of the Work, and shall not cause any insurance to be canceled or lapse.
- B. No compensation due if Port elects to use and occupy Work. No additional compensation shall be due to the Contractor as a result of the Port's use or occupancy of the Work or a designated portion.

ARTICLE 7 - PAYMENT

7.01 ALL PAYMENTS SUBJECT TO APPLICABLE LAWS AND SCHEDULE OF VALUES

- A. Payment of the Contract Sum. The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Port to the Contractor for performance of the Work under the Contract Documents. Payments made to the Contractor are subject to all laws applicable to the Port and the Contractor. Payment of the Contract Sum constitutes full compensation to the Contractor for performance of the Work, including all risk, loss, damages, or expense of whatever character arising out of the nature or prosecution of the Work. The Port is not obligated to pay for extra work or materials furnished without prior written approval of the Port.
- B. Schedule of Values. All payments will be based upon an approved Schedule of Values. Prior to submitting its first Application for Payment, the Contractor shall submit a Schedule of Values to the Port allocating the entire Contract Sum to the various portions of the Work. The Schedule of Values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Port may require. This schedule, unless objected to by the Port, shall be used as a basis for reviewing the Contractor's applications for payment.

7.02 APPLICATIONS FOR PAYMENT

- A. Applications for Payment. Progress payments will be made monthly for Work duly certified, approved by the Engineer, and performed (based on the Schedule of Values and actual quantities of Work performed) during the calendar month preceding the Application for Payment. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent, and in accordance with, the approved Application for Payment.

7.03 PROGRESS PAYMENTS

- A. Progress payments. Following receipt of a complete Application for Payment, the Engineer will either authorize payment or indicate in writing to the Contractor the specific reasons why the payment request is being denied, in whole or in part, and the remedial action the Contractor must take to receive the withheld amount. After a complete Application for Payment has been received and approved by the Port, payment will be made within thirty (30) days. Any payments made by, or through, or following receipt of, payment from third parties will be made in accordance with the third party's policies and procedures.
- B. Port may withhold payment. The Port may withhold payment in whole or in part as provided in the Contract Documents or to the extent reasonably necessary to protect the Port from loss or potential loss for which the Contractor is responsible, including loss resulting from the Contractor's acts and omissions.

7.04 PAYMENT BY CONTRACTOR TO SUBCONTRACTORS

- A. Payment to Subcontractors. With each Application for Payment, the Contractor shall provide a list of Subcontractors to be paid by the Contractor. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, however, after submitting an Application for Payment, but before paying a Subcontractor, the Contractor discovers that part or all of a payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as for unsatisfactory performance or non-payment of lower-tier Subcontractors), the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the Port written notice of the remedial actions that must be taken and pay the Subcontractor within eight (8) working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.
- B. Payment certification to be provided upon request. The Contractor shall provide, with each Application for Payment, a certification signed by Contractor attesting that all payments by the Contractor to Subcontractors from the last Application for Payment were made within ten (10) days of the Contractor's receipt of payment. The certification will also attest that the Contractor will make payment to Subcontractors for the current Application for Payment within ten (10) days of receipt of payment from the Port.

7.05 FINAL PAYMENT

- A. Final payment. Final applications for payment are due within seven (7) days following Final Completion. Final payment of the unpaid balance of the Contract Sum, except retainage, will be made following Final Completion and within thirty (30) days of the Contractor's submission of an approved final Application for Payment.

- B. Releases required for final payment. The final payment shall not become due until the Contractor delivers to the Port a complete release of all liens arising out of the Contract, as well as an affidavit stating that, to the best of Contractor's knowledge, its release includes all labor and materials for which a lien could be filed. If a Subcontractor of any tier refuses to furnish a release or waiver required by the Port, the Port may (a) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (b) accept a bond from the Contractor, satisfactory to the Port, to indemnify the Port against the lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Port all moneys that the Port may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.
- C. Contractor to hold Port harmless from liens. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port from any liens, claims, demands, lawsuits, losses, damages, disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct or indirect, including but not limited to, attorneys' fees and consultants' fees and other costs and expenses, except to the extent a lien has been filed because of the failure of the Port to make a contractually required payment.

7.06 RETAINAGE

- A. Retainage to be withheld. In accordance with RCW 60.28, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. Prior to submitting its first Application for Payment, the Contractor shall exercise one of the options listed below:
 - 1. Retained percentages will be retained by the Port in a fund; or
 - 2. Deposited by the Port in an interest-bearing account or escrow account in a bank, mutual savings bank, or savings and loan association designated by the Contractor, not subject to withdrawal until after the final acceptance of said improvement or work as completed, or until agreed to by both parties; provided that interest on such account shall be paid to the Contractor. Contractor to complete and submit Port provided Retainage Escrow Agreement (Section 00 61 23.13); or
 - 3. If the Contractor provides a bond in place of retainage, it shall be in an amount equal to 5% of the Contract Sum plus Change Orders. The retainage bond shall be based on the form furnished in Section 00 61 23 or otherwise acceptable to the Port and duly completed and signed by a licensed surety or sureties registered with the Washington State Insurance Commissioner and on the currently authorized insurance list published by the Washington State Insurance Commissioner. The surety or sureties must be rated at least "A-, FSC(6)" or higher by A.M. Best Rating Guide and be authorized by the Federal Department of the Treasury. Attorneys-in-fact who sign the retainage bond must file with each bond a certified and effective Power of Attorney statement.
- B. Contractor may withhold retainage from Subcontractors. The Contractor or a Subcontractor may withhold not more than five percent (5%) retainage from the monies earned by any Subcontractor or lower-tier Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Port, the Contractor shall specify the amount of retainage and interest due a Subcontractor.

- C. Release of retainage. Retainage will be withheld and applied by the Port in a manner required by RCW 60.28 and released in accordance with the Contract Documents and statutory requirements. Release of the retainage will be processed in the ordinary course of business within sixty (60) days following Final Acceptance of the Work by the Port provided that no notice of lien has been given as provided in RCW 60.28, that no claims have been brought to the attention of the Port, that the Port has no claims under this Contract, and that release of retention has been duly authorized by the State. The following items must also be obtained prior to release of retainage: pursuant to RCW 60.28, a certificate from the Department of Revenue; pursuant to RCW 50.24, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries including approved affidavits of wages paid for the Contractor and each subcontractor.

7.07 DISPUTED AMOUNTS

- A. Disputed amounts. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may submit to the Port, along with the approved Application for Payment, a separate written payment request specifying the exact additional amount claimed to be due, the category in the Schedule of Values to which the payment would apply, the specific Work for which additional payment is sought, and an explanation of why the Contractor believes additional payment is due.

7.08 EFFECT OF PAYMENT

- A. Payment does not relieve Contractor of obligations. Payment to the Contractor of progress payments or final payment does not relieve the Contractor from its responsibility for the Work or its responsibility to repair, replace, or otherwise make good defective Work, materials, or equipment. Likewise, the making of a payment does not constitute a waiver of the Port's right to reject defective or non-conforming Work, materials, or equipment (even though they are covered by the payment), nor is it a waiver of any other rights of the Port.
- B. Acceptance of final payment waives claims. Acceptance of final payment by the Contractor, a Subcontractor of any tier, or a supplier shall constitute a waiver of claims except those previously made in writing and identified as unsettled in Contractor's final Application for Payment.
- C. Execution of Change Order waives claims. The execution of a Change Order shall constitute a waiver of claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order.

7.09 LIENS

- A. Contractor to discharge liens. The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials, or other items in connection with the performance of the Work including, but not limited to, any Subcontractors of any tier.

ARTICLE 8 - CHANGES IN THE WORK

8.01 CHANGES IN THE WORK

- A. Changes in the Work authorized. Without invalidating the Contract and without notice to the Contractor's surety, the Port may authorize changes in the Work after execution of the Contract, including changes in the Contract Sum or Contract Time. Changes shall occur solely by Change Order, Unilateral Change Directive, or Minor Change in Work. All changes in the Work are effective immediately, and the Contractor shall proceed promptly to perform the change, unless otherwise provided in the Change Order or Directive.

B. Changes in the Work Defined.

1. A Change Order is a written instrument signed by the Port and Contractor stating their agreement to a change in the Work and the adjustment, if any, in the Contract Sum and/or Contract Time.
2. A Unilateral Change Directive is a written instrument issued by the Port to transmit new or revised Drawings, issue additions or modifications to the Contract, furnish other direction and documents adjustment, if any, to the Contract Sum and/or Contract Time. A Unilateral Change Directive is signed only by the Port, without requiring the consent or signature of the Contractor.
3. A Minor Change in the Work is a written order from the Port directing a change that does not involve an adjustment to the Contract Sum or the Contract Time.

C. Request for Proposal: At any time, the Port may issue a Proposal Request directing the Contractor to propose a change to the Contract Sum and/or Contract Time, if any, based on a proposed change in the Work. The Contractor shall submit a responsive Change Order proposal as soon as possible, and no later than fourteen (14) days after receipt, in which the Contractor specifies in good faith the extent to which the Contract Sum and/or Contract Time would change. All cost components shall be limited to the manner described in Section 8.02(B). If the Contractor fails to timely respond to a Proposal Request, the Port may issue the change as a Unilateral Change Directive.

1. Fixed price method is default for Contractor Change Order proposal. When the Port has requested that the Contractor submit a Change Order proposal, the Port may specify the basis on which the Contract Sum will be adjusted by the Contractor. The Engineer's preference, unless otherwise indicated, is for changes in the Work to be priced using Lump Sums or Unit Prices or on a time and material (Force Account) basis if unit pricing or lump sums cannot be negotiated or determined. In all instances, however, proposed changes shall include a not-to-exceed price for the change and shall be itemized for evaluation purposes in accordance with Section 8.02(B), as requested by the Engineer.
2. The Port may accept or reject the Contractor's Change Order proposal, request further documentation, or negotiate acceptable terms with the Contractor. If The Port and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order.
3. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment. The Port may reject a proposal, in which case the Port may either not effectuate the change or issue a Unilateral Change Directive. The Port will not make payment to the Contractor for any work until that work has been incorporated into an executed Change Order.

- D. Unforeseen Conditions: If the Contractor encounters conditions at the site that are: (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or any soils reports made available by the Port to the Contractor, or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall immediately provide oral notice to the Engineer before conditions are disturbed, followed within 24 hours by an initial written notice. The Contractor shall submit a detailed proposal no later than seven (7) days following discovery of differing site conditions. The Engineer will promptly investigate these conditions and, if the Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost or time required for performance of any part of the Work, will establish a change in the Contract Sum or Contract Time, or both, consistent with the requirements of the Contract Documents. If the Contractor disputes the Engineer's determination, the Contractor may proceed as provided in the dispute resolution procedure (Article 11). No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor does not comply with the contractual requirements or if the Contractor knew, or reasonably should have known, of the concealed conditions prior to executing the Contract.
- E. Proceed Immediately: Pending agreement on the terms of the Change Order or upon determination of a differing site condition as defined in 8.01(D), the Engineer may direct Contractor to proceed immediately with the change in the Work. Contractor shall not proceed with any change in the Work until it has obtained the Engineer's written approval and documentation of the following:
1. The scope of work
 2. An agreed upon maximum not-to-exceed amount
 3. The method of final cost determination
 4. Estimated time to complete the changed work
 5. As a change in the Work is performed, unless the parties have signed a written Change Order to establish the cost of the change, the Contractor shall maintain an itemized accounting of all costs related to the change based on the categories in Section 8.02(B) and provide such data to the Port upon request. This includes, without limitation, invoices, including freight and express bills, and other support for all material, equipment, Subcontractor, and other charges related to the change and, for material furnished from the Contractor's own inventory, a sworn affidavit certifying the actual cost of such material. Failure to provide data to the Port within seven (7) days of a request constitutes a waiver of any claim. The Port may furnish any material or equipment to the Contractor that it deems advisable, and the Contractor shall have no claim for any costs or fee on such material or equipment.
- F. Procedure for Unilateral Change Directive. Whether or not the Port has rejected a Contractor's proposal, the Port may issue a Unilateral Change Directive and the Contractor shall promptly proceed with the specified Work. If the Contractor disagrees with a Unilateral Change Directive, the Contractor shall advise the Port in writing through a Change Order proposal within seven (7) days of receipt. The Contractor's Change Order proposal shall reasonably specify the reasons for any disagreement and the adjustment it proposes. Without this timely Change Order proposal, the Contractor shall conclusively be deemed to have accepted the Port's proposal.

- G. Payment pending final determination of Force Account work. Pending final determination of the total cost of Force Account Work, and provided that the Work to be performed under Force Account is complete and any reservations of rights have been signed by the Port, the Contractor may request payment for amounts not in dispute in the next Application for Payment accompanied by documentation indicating the parties' agreement. Work done on a Force Account basis must be approved in writing on a daily basis by the Engineer or the Engineer's designee and invoices shall be submitted with an Application for Payment within sixty (60) days of performance of the Work.

8.02 CHANGES IN THE CONTRACT SUM

- A. Port to Decide How Changes are Measured. The Port may elect, in its sole discretion, how changes in the Work will be measured for payment. Change in the Work may be priced on a lump sum basis, through Unit Prices, as Force Account, or by another method documented in the executed Change Order, Unilateral Change Directive, or Minor Change in the Work.
- B. Determination of Cost of Change. The total cost of any change in the Work, including a claim under Article 11, shall not exceed the prevailing cost for the Work in the locality of the Project. In all circumstances, the change in the Work shall be limited to the reasonable, actual cost of the following components:
1. Direct labor costs: These are the actual labor costs determined by the number of additional craft hours at their normal hourly rate necessary to perform a change in the Work. The hourly cost of labor will be based upon the following:
 - a. Basic wages and fringe benefits: The hourly wage (without markup or labor burden) and fringe benefits paid by the Contractor as established by the Washington Department of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable, not to exceed that specified in the applicable "Intent to Pay Prevailing Wage," for the laborers, apprentices, journeymen, and foremen performing or directly supervising the change in the Work on site. These wages do not include the cost of Contractor's project manager or superintendent or above, and the premium portion of overtime wages is not included unless pre-approved in writing by the Port. Costs paid or incurred by the Contractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Contractor shall provide to the Port copies of payroll records, including certified payroll statements for itself and Subcontractors of any tier, upon the Port's request.
 - b. Workers' insurance: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.
 - c. Federal insurance: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).
 2. Direct material costs: This is an itemization, including material invoices, of the quantity and actual cost of additional materials necessary to perform the change in the Work. The cost will be the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed unless approved in advance by the Port.

3. Construction equipment usage costs: This is an itemization of the actual length of time that construction equipment necessary and appropriate for the Work is used solely on the changed Work times the applicable rental cost as established by the lower of the local prevailing rates published in www.equipmentwatch.com, as modified by the AGC/WSDOT agreement, or the actual rate paid to an unrelated third party. If more than one rate is applicable, the lowest available rate will be utilized. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Port's prior written approval. Total rental charges for equipment or tools shall not exceed 75% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the site solely for the change in the Work. Mobilization and standby costs shall not be charged for equipment already present on the site.

The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design, and in good working condition, and include full compensation for furnishing all fuel, oil, lubrication, repairs, maintenance, and insurance. No gas surcharges are payable. Equipment not of modern design and/or not in good working condition will have lower rates. Hourly, weekly, and/or monthly rates, as appropriate, will be applied to yield the lowest total cost.

4. Subcontractor costs: These are payments the Contractor makes to Subcontractors for changed Work performed by Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02 and, among other things, shall not include consultant costs, attorneys' fees, or claim preparation expenses.
5. Service provider costs: These are payments the Contractor makes to service providers for changed Work performed by service providers. The service providers' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02.
6. Markup: This is the maximum total amount for overhead, profit, and other costs, including office, home office and site overhead (including purchasing, project manager, superintendent, project engineer, estimator, and their vehicles and clerical assistants), taxes (except for sales tax on the Contract Sum), warranty, safety costs, printing and copying, layout and control, quality control/assurance, small or hand tools (a tool that costs \$500 or less and is normally furnished by the performing contractor), preparation of as-built drawings, impact on unchanged Work, Change Order and/or claim preparation, and delay and impact costs of any kind (cumulative, ripple, or otherwise), added to the total cost to the Port of any Change Order work. No markup shall be due, however, for direct settlements of Subcontractor claims by the Port after Substantial Completion. The markup shall be limited in all cases to the following schedule:
- a. Direct labor costs -- 20% markup on the direct cost of labor for the party (Contractor or Subcontractor) providing labor related to the change in the Work;
 - b. Direct material costs -- 20% markup on the direct cost of material for the party (Contractor or Subcontractor) providing material related to the change in the Work;
 - c. Construction equipment usage costs -- 10% markup on the direct cost of equipment for the party (Contractor or Subcontractor) providing equipment related to the change in the Work;

- d. Contractor markup on Subcontractor costs -- 10% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by Subcontractors (and for Subcontractors, for a change in the Work performed by lower-tier Subcontractors); and
- e. Service provider costs -- 5% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by service providers.

The total summed markup of the Contractor and all Subcontractors of any tier shall not exceed 30% of the direct costs of the change in the Work. If the markup would otherwise exceed 30%, the Contractor shall proportionately reduce the markup for the Contractor and all Subcontractors of any tier.

7. Cost of change in insurance or bond premium. This is defined as:

- a. Contractor's liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance provided under the Contract Documents and subject to audit) of the Contractor's liability insurance arising directly from the changed Work; and
- b. Public works bond: The actual cost (expressed as a percentage submitted under the Contract Documents and subject to audit) of the Contractor's performance and payment bond arising directly from the changed Work.

Upon request, the Contractor shall provide the Port with supporting documentation from its insurer or surety of any associated cost incurred. The cost of the insurance or bond premium together shall not exceed 2.0% of the cost of the changed Work.

- 8. Unit Prices. If Unit Prices are specified in the Contract Documents or established by agreement of the parties for certain Work, the Port may apply them to the changed Work. Unit Prices shall include pre-agreed rates for material quantities and shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs arising out of, or related to, the Unit Priced item. Quantities must be supported by field measurement statements signed by the Port, and the Port shall have access as necessary for quantity measurement. The Port shall not be responsible for not-to-exceed limit(s) without its prior written approval.

8.03 CHANGES IN THE CONTRACT TIME

- A. Extension of the Contract Time. If the Contractor is delayed at any time in the commencement or progress of the Work by events for which the Port is responsible, by unanticipated abnormal weather (subject to Section 8.03(E) below), or by other causes not the fault or responsibility of the Contractor that the Port determines may justify a delay in the Contract Time, then the Contract Time shall be extended by Change Order for such reasonable time as the Port may determine. In no event, however, shall the Contractor be entitled to any extension of time absent proof of: (1) delay to an activity on the critical path of the Project, or (2) delay transforming an activity to the critical path, so as to actually delay the anticipated date of Substantial Completion.
- B. Allocation of responsibility for delay not caused by Port or Contractor. If a delay was not caused by the Port, the Contractor, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time but not an increase in the Contract Sum.

- C. Allocation of responsibility for delay caused by Port. If a delay was caused by the Port or someone acting on behalf of the Port and affected the critical path, the Contractor shall be entitled to a change in the Contract Time and Contract Sum in accordance with Section 8.02. The Contractor shall not recover damages, an equitable adjustment, or an increase in the Contract Sum or Contract Time from the Port; however, where the Contractor could reasonably have avoided the delay. The Port is not obligated directly or indirectly for damages for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.
- D. Allocation of responsibility for delay caused by Contractor. If a delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.
- E. Adverse weather. If adverse weather is identified as the basis for a claim for additional time, the claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not reasonably have been anticipated and had an adverse effect on the critical path of construction, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. For a claim based on adverse weather, the Contractor shall be eligible only for a change in the Contract Time (but not a change in the Contract Sum) if the Contractor can substantiate that there was significantly greater than normal inclement weather considering the full term of the Contract Time.
- F. Damages for delay. In the event the Contractor (including any Subcontractors of any tier) is held to be entitled to damages from the Port for delay beyond the amount permitted in Section 8.02(B), the total combined damages to the Contractor and any Subcontractors of any tier for each day of delay shall be limited to the reasonable, actual costs of the delay for which the Port is wholly responsible. The limitation on damages set forth in this Section does not apply to any damages arising exclusively from delay to which the Contractor is entitled to recover under Section 8.03(F).
- G. Limitation on damages. The Contractor shall not be entitled to damages arising out of loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant under run; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended or increased overhead or general conditions; profit upon damages for delay; impact damages including cumulative impacts; or similar damages. Any effect that such alleged costs may have upon the Contractor or its Subcontractors of any tier is fully compensated through the markup on Change Orders paid through Section 8.02(B).

8.04 RESERVATION OF RIGHTS

- A. Reservations of rights void unless signed by Port. Reservations of rights will be deemed waived and are void unless any reserved rights are described in detail and are signed by the Contractor and the Port.
- B. Procedure for unsigned reservations of rights. If the Contractor adds a reservation of rights not signed by the Port to any Change Order, Unilateral Change Directive, Change Order proposal, Application for Payment, or any other document, all amounts and all Work therein shall be considered disputed and not payable until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to, and signed by, the Port. If the Port makes payment based on a document that contains a reservation of rights not signed by the Port, and if the Contractor cashes such payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

8.05 UNIT PRICES

- A. Adjustment to Unit Prices. If Unit Prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (less than eighty percent (80%) or more than one hundred and twenty percent (120%) of the quantity estimated) so that application of a Unit Price would be substantially unfair, the applicable Unit Price but not the Contract Time, shall be adjusted if the Port prospectively approves a Change Order revising the Unit Price.
- B. Procedure to change Unit Prices. The Contractor or Port may request a Change Order revising a Unit Price by submitting information to support the change. A proposed change to a Unit Price will be evaluated by the Port based on the change in cost resulting solely from the change in quantity, any change in production rate or method as compared to the original plan, and the share, if any, of fixed expenses properly chargeable to the item. If the Port and Contractor agree on the change, a Change Order will be executed. If the parties cannot agree, the Contractor shall comply with the dispute resolution procedures (Article 11).

ARTICLE 9 - SUSPENSION AND TERMINATION OF CONTRACT

9.01 PORT'S RIGHT TO SUSPEND WORK

- A. Port may suspend the Work. The Port may at any time suspend the Work, or any part thereof, by giving notice to the Contractor. The Work shall be resumed by the Contractor as soon as possible, but no later than fourteen (14) days after the date fixed in a notice to resume the Work. The Port shall reimburse the Contractor for appropriate and reasonable expenses consistent with Section 8.02 incurred by the Contractor as a result of the suspension, except where a suspension is the result of the Contractor repeatedly or materially failing to carry out or correct the Work in accordance with the Contract Documents, and the Contractor shall take all necessary steps to minimize expenses.
- B. Contractor obligations. During any suspension of Work, the Contractor shall take every precaution to prevent damage to, or deterioration of, the Work. The Contractor shall be responsible for all damage or deterioration to the Work during the period of suspension and shall, at its sole expense, correct or restore the Work to a condition acceptable to the Port prior to resuming Work.

9.02 TERMINATION OF CONTRACT FOR CAUSE BY THE PORT

- A. Port may terminate for cause. If the Contractor is adjudged bankrupt or makes a general assignment for the benefit of the Contractor's creditors, if a receiver is appointed due to the Contractor's insolvency, or if the Contractor, in the opinion of the Port, persistently or materially refuses or fails to supply enough properly skilled workmen or materials for proper completion of the Contract, fails to make prompt payment to Subcontractors or suppliers for material or labor, disregards laws, ordinances, or the instructions of the Port, fails to prosecute the Work continuously with promptness and diligence, or otherwise materially violates any provision of the Contract, then the Port, without prejudice to any other right or remedy, may terminate the Contractor after giving the Contractor seven (7) days' written notice (during which period the Contractor shall have the right to cure).
- B. Procedure following termination for cause. Following a termination for cause, the Port may take possession of the Project site and all materials and equipment, and utilize such materials and equipment to finish the Work. The Port may also exclude the Contractor from the Project site(s). If the Port elects to complete all or a portion of the Work, it may do so as it sees fit. The Port shall not be required to accept the lowest bid for completion of the Work and may choose to complete all or a portion of the Work using its own work force. If the Port elects to complete all or a portion of the Work, the Contractor shall not be entitled to any further payment until the Work is finished. If the expense of finishing the Work, including compensation for additional managerial and administrative services of the Port, exceeds the unpaid balance of the Contract Sum, the excess shall be paid by the Contractor.
- C. Port's remedies following termination for cause. The Port may exercise any rights, claims, or demands that the Contractor may have against third persons in connection with the Contract, and for this purpose the Contractor assigns and transfers to the Port all such rights, claims, and demands.
- D. Inadequate termination for cause converted to termination for convenience. If, after the Contractor has been terminated for cause, it is determined that inadequate "cause" for such termination exists, then the termination shall be considered a termination for convenience pursuant to Section 9.03.

9.03 TERMINATION OF CONTRACT FOR CONVENIENCE BY THE PORT

- A. Port may terminate for convenience. The Port may, at any time (without prejudice to any right or remedy of the Port), terminate all, or any portion of, the Contract for the Port's convenience and without cause. The Contractor shall be entitled to receive payment consistent with the Contract Documents only for Work properly executed through the date of termination, and costs necessarily incurred by reason of the termination (such as the cost of settling and paying claims arising out of the termination under subcontracts or orders), along with a fee of one percent (1%) of the Contract Sum not yet earned on the whole or part of the Work. The total amount to be paid to the Contractor shall not exceed the Contract Sum as reduced by the amount of payments otherwise made. The Port shall have title to all Work performed through the date of termination.

9.04 TERMINATION OF CONTRACT BY THE CONTRACTOR

- A. Contractor may terminate for cause. The Contractor may terminate the Contract if the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor of any tier, for either of the following reasons:
 - 1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or

2. An act of government, such as a declaration of national emergency, that requires all Work to be stopped.
- B. Procedure for Contractor termination. If one of the reasons described in Section 9.04A exists, the Contractor may, upon seven (7) days' written notice to the Port (during which period the Port has the opportunity to cure), terminate the Contract and recover from the Port payment for Work executed through the date of termination in accordance with the Contract Documents and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed and direct costs incurred by reason of such termination. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.
- C. Contractor may stop the Work for failure of Port to pay undisputed amounts. The Contractor may stop Work under the Contract if the Port does not pay undisputed amounts due and owing to the Contractor within fifteen (15) days of the date established in the Contract Documents. If the Port fails to pay undisputed amounts, the Contractor may, upon fifteen (15) additional days' written notice to the Port, during which the Port can cure, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately, and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay, and start-up.

9.05 SUBCONTRACT ASSIGNMENT UPON TERMINATION

- A. Subcontracts assigned upon termination. Each subcontract is hereby assigned by the Contractor to the Port provided that:
1. The Port requests that the subcontract be assigned.
 2. The assignment is effective only after termination by the Port and only for those subcontracts that the Port accepts in writing.
 3. The assignment is subject to the prior rights of the surety, if any, under any bond issued in accordance with the Contract Documents.

When the Port accepts the assignment of a subcontract, the Port assumes the Contractor's rights and obligations under the subcontract, but only for events and payment obligations that arise after the date of the assignment.

ARTICLE 10 - BONDS

10.01 CONTRACTOR PERFORMANCE AND PAYMENT BONDS

- A. Contractor to furnish performance and payment bonds. Within fifteen (15) days following its receipt of a notice of award, and as part of the Contract Sum, the Contractor shall secure and furnish duly executed performance and payment bonds using the forms furnished by the Port. The bonds shall be executed by a surety (or sureties) reasonably acceptable to the Port, admitted and licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC (6)" or better and be authorized by the U.S. Department of the Treasury. Pursuant to RCW 39.08, the bonds shall be in an amount equal to the Contract Sum, and shall be conditioned only upon the faithful performance of the Contract by the Contractor within the Contract Time and upon the payment by the Contractor of all taxes, fees, and penalties to the State of Washington and all laborers, Subcontractors, and suppliers, and others who supply provisions, equipment, or supplies for the performance of the Work covered by this Contract. The bonds shall be signed by the person or persons legally authorized to bind the Contractor.

- B. On contracts of one hundred fifty thousand dollars or less, at the option of the contractor as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the Employment Security Department, and the Department of Labor and Industries and settlement of any liens filed under chapter 60.28 RCW, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.

For contracts of one hundred fifty thousand dollars or less, the Port may accept a full payment and performance bond from an individual surety or sureties.

- C. Port may notify surety. If the Port makes or receives a claim against the Contractor, the Port may, but is not obligated to, notify the Contractor's surety of the nature and amount of the claim. If the claim relates to a possibility of a Contractor's default, the Port may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

ARTICLE 11 - DISPUTE RESOLUTION

11.01 NOTICE OF PROTEST AND CLAIM

- A. Dispute resolution procedure mandatory. All claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, shall be decided exclusively by the following alternative dispute resolution procedure, unless the parties mutually agree otherwise. If the Port and Contractor agree to a partnering process to assist in the resolution of disputes, the partnering process shall occur prior to, and not be in place of, the mandatory dispute resolution procedures set forth below.
- B. Notice of protest defined. Except for claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall provide immediate oral notice of protest to the Engineer prior to performing any disputed Work and shall submit a written notice of protest to the Port within seven (7) days of the occurrence of the event giving rise to the protest that includes a clear description of the event(s). The protest shall identify any point of disagreement, those portions of the Contract Documents believed to be applicable, and an estimate of quantities and costs involved. When a protest relates to cost, the Contractor shall keep full and complete records and shall permit the Port to have access to those records at any time as requested by the Port.

- C. Claim defined. A claim is a demand by one of the parties seeking adjustment or interpretation of the Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract Documents. The term "claim" also includes all disputes and matters in question between the Port and Contractor arising out of, or relating to, the Contract Documents. Claims must be initiated in writing and include a detailed factual statement and clear description of the claim providing all necessary dates, locations, and items of Work, the date or dates on which the events occurred that give rise to the claim, the names of employees or representatives knowledgeable about the claim, the specific provisions of the Contract Documents that support the claim, any documents or oral communications that support the claim, any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path), and all other data supporting the claim. Claims shall also be submitted with a statement certifying, under penalty of perjury, that the claim as submitted is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the claim is fully supported, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes the Port is liable. A claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor and Subcontractors of any tier are entitled and may not contain reservations of rights without the Port's written approval; any unapproved reservations of rights shall be without effect.
- D. Claim procedure. The Contractor shall submit a written claim within thirty (30) days of providing written notice of protest. The Contractor may delay submitting supporting data by an additional thirty (30) days if it notifies the Port in its claim that substantial data must be assembled. Any claim of a Subcontractor of any tier may be brought only through, and after review by and concurrence of, the Contractor.
- E. Failure to comply with notice of protest and claim requirements waives claims. Any notice of protest by the Contractor and any claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to, and in strict accordance with, the applicable provisions of the Contract. Failure to properly and timely submit a notice of protest or to timely submit a claim shall waive the claim. No act, omission, or knowledge, actual or constructive, of the Port shall waive the requirement for timely written notice of protest and a timely written claim, unless the Port and the Contractor sign an explicit, unequivocal written waiver approved by the Port. The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices of protest and/or timely submit claims has a substantial impact upon, and prejudices, the Port. For the purpose of calculating time periods, an "event giving rise to a claim," among other things, is not a Request for Information, but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time.
- F. False claims. The Contractor shall not make any fraudulent misrepresentations, concealments, errors, omissions, or inducements to the Port in the formation or performance of the Contract. If the Contractor or a Subcontractor of any tier submits a false or frivolous claim to the Port, which for purposes of this Section 11.01(F) is defined as a claim based in whole or in part on a materially incorrect fact, statement, representation, assertion, or record, the Port shall be entitled to collect from the Contractor by offset or otherwise (without prejudice to any right or remedy of the Port) any and all costs and expenses, including investigation and consultant costs, incurred by the Port in investigating, responding to, and defending against the false or frivolous claim.

- G. Compliance with lien and retainage statutes required. If a claim relates to, or is the subject of, a lien or retainage claim, the party asserting the claim may proceed in accordance with applicable law to comply with the notice and filing deadlines prior to resolution of the claim by mediation or by litigation.
- H. Performance required pending claim resolution. Pending final resolution of a claim, the Contractor shall continue to perform the Contract and maintain the Baseline Project Schedule, and the Port shall continue to make payments of undisputed amounts due in accordance with the Contract Documents.

11.02 MEDIATION

- A. Claims must be subject to mediation. At any time following the Port's receipt of a written claim, the Port may require that an officer of the Contractor and the Port's designee (all with authority to settle) meet, confer, and attempt to resolve a claim. If the claim is not resolved during this meeting, the claim shall be subject to mandatory mediation as a condition precedent to the initiation of litigation. This requirement can be waived only by an explicit, written waiver signed by the Port and the Contractor.
- B. Mediation procedure. A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to agree upon a mediator. If the parties have not reached agreement within thirty (30) days of the request, either party may file the request with the American Arbitration Association, or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service). The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in Pierce County, Washington, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof. Unless the Port and the Contractor mutually agree in writing otherwise, all claims shall be considered at a mediation session that shall occur prior to Final Completion.

11.03 LITIGATION

- A. Claims not resolved by mediation are subject to litigation. Claims not resolved through mediation shall be resolved by litigation, unless the parties mutually agree otherwise. The venue for any litigation shall be Pierce County, Washington. The Contractor may bring no litigation on claims, unless such claims have been properly raised and considered in the procedures of this Article 11. The Contractor must demonstrate in any litigation that it complied with all requirements of this Article.
- B. Litigation must be commenced promptly. All unresolved claims of the Contractor shall be waived and released, unless the Contractor has complied with the requirements of the Contract Documents, and litigation is served and filed within 180 days of the date of Substantial Completion approved in writing by the Port or termination of the Contract. The pendency of mediation (the time period between receipt by the non-requesting party of a written mediation request and the date of mediation) shall toll these deadlines until the earlier of the mediator providing written notice to the parties of impasse, or thirty (30) days after the date of the mediation session.
- C. Port not responsible for attorneys' fees. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Port (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).

- D. Port may join Contractor in dispute. The Port may join the Contractor as a party to any litigation or arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

ARTICLE 12 - MISCELLANEOUS

12.01 GENERAL

- A. Rights and remedies are cumulative. The rights and remedies of the Port set forth in the Contract Documents are cumulative, and in addition to and not in limitation of, any rights and remedies otherwise available to the Port. The pursuit of any remedy by the Port shall not be construed to bar the Port from the pursuit of any other remedy in the event of similar, different, or subsequent breaches of this Contract. All such rights of the Port shall survive completion of the Project or termination of the Contractor.
- B. Reserved rights do not give rise to duty. The rights reserved or possessed by the Port to take any action shall not give rise to a duty for the Port to exercise any such right.

12.02 WAIVER

- A. Waiver must be in writing and authorized by Port. Waiver of any provisions of the Contract Documents must be in writing and authorized by the Port. No other waiver is valid on behalf of the Port.
- B. Inaction or delay not a waiver. No action, delay in acting, or failure to act by the Port shall constitute a waiver of any right or remedy of the Port, or constitute an approval or acquiescence of any breach or defect in the Work, nor shall any delay or failure of the Port to act waive or otherwise prejudice the right of the Port to enforce a right or remedy at any subsequent time.
- C. Claim negotiation not a waiver. The fact that the Port and the Contractor may consider, discuss, or negotiate a claim that has or may have been defective or untimely under the Contract, shall not constitute a waiver of the provisions of the Contract Documents, unless the Port and the Contractor sign an explicit, unequivocal waiver.

12.03 GOVERNING LAW

- A. Washington law governs. This Contract and the rights and duties of the parties hereunder shall be governed by the internal laws of the State of Washington, without regard to its conflict of law principles.

12.04 COMPLIANCE WITH LAW

- A. Contractor to comply with applicable laws. The Contractor shall at all times comply with all applicable Federal, State and local laws, ordinances, and regulations. This compliance shall include, but is not limited to, the payment of all applicable taxes, royalties, license fees, penalties, and duties.
- B. Contractor to provide required notices. The Contractor shall give notices required by all applicable Federal, State and local laws, ordinances, and regulations bearing on the Work.
- C. Contractor to confine operations at site to permitted areas. The Contractor shall confine operations at the Project site to areas permitted by applicable laws, ordinances, permits, rules and regulations, and lawful orders of public authorities and the Contract Documents.

12.05 ASSIGNMENT

- A. Assignment. The Port and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party and to the partners, successors, assigns, and legal representatives of such other party. The Contractor may not assign, transfer, or novate all or any portion of the Contract, including but not limited to, any claim or right to the Contract Sum, without the Port's prior written consent. If the Contractor attempts to make an assignment, transfer, or novation without the Port's consent, the assignment shall be of no effect, and Contractor shall nevertheless remain legally responsible for all obligations under the Contract. The Contractor also shall not assign or transfer, to any third party, any claims it may have against the Port arising under the Contract or otherwise related to the Project.

12.06 TIME LIMIT ON CAUSES OF ACTION

- A. Time limit on causes of action. The Port and Contractor shall commence all causes of action, whether in contract, tort, breach of warranty, or otherwise, against the other arising out of, or related to, the Contract in accordance with the requirements of the dispute resolution procedure set forth in Article 11 of these General Conditions, within the time period specified by applicable law, and within the time limits identified in the Contract Documents. The Contractor waives all claims and causes of action not commenced in accordance with this Section 12.06.

12.07 SERVICE OF NOTICE

- A. Notice. Written notice under the Contract Documents by either the Contractor or Port may be served on the other party by personal service, electronic or facsimile transmission, or delivery service to the last address provided in writing to the other party. For the purpose of measuring time, notice shall be deemed to be received by the other party on the next business day following the sender's electronic or facsimile transmittal or delivery by delivery service.

12.08 RECORDS

- A. Contractor and Subcontractors to maintain records and cooperate with Port audit. The Contractor and Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, and other tangible and electronic data and evidence relating or pertaining to costs and/or performance of the Contract ("records") to such extent, and in such detail, as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges, and other amounts of whatever nature. The Contractor shall preserve these records for a period of six (6) years following the date of Final Acceptance under the Contract. Within seven (7) days of the Port's request, both during the Project and for six (6) years following Final Acceptance, the Contractor and Subcontractors of any tier shall make available, at their office during normal business hours, all records for inspection, audit, and reproduction (including electronic reproduction) by the Port or its representatives; failure to fully comply with this requirement shall constitute a material breach of contract and a waiver of all claims by the Contractor and Subcontractors of any tier.
- B. Rights under RCW 42.56. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under Chapter 42.56 RCW will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Port.

12.09 STATUTES

- A. Contractor to comply with Washington statutes. The Contractor shall abide by the provisions of all applicable statutes, regulations, and other laws. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be, and are not, a complete list.
 - 1. Pursuant to RCW 39.06, "Registration, Licensing of Contractors," the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors," and shall satisfy all State of Washington bonding and insurance requirements. The Contractor shall also have a current state Unified Business Identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required by Title 51 RCW; have an Employment Security Department number as required by Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW; and not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
 - 2. The Contractor shall comply with all applicable provisions of RCW 49.28, "Hours of Labor."
 - 3. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Discrimination."
 - 4. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.
 - 5. Pursuant to RCW 50.24, "Contributions by Employers," in general, and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for an acceptable bond.
 - 6. The Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."

7. Pursuant to RCW 49.70, "Worker and Community Right to Know Act," and WAC 296-62-054 et seq., the Contractor shall provide to the Port, and have copies available at the Project site, a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor of any tier.
8. All products and materials incorporated into the Project as part of the Work shall be certified as "asbestos-free" and "lead-free" by United States standards, and shall also be free of all hazardous materials or substances. At the completion of the Project, the Contractor shall submit certifications of asbestos-free and of lead-free materials certifying that all materials and products incorporated into the Work meet the requirements of this Section, and shall also certify that materials and products incorporated into the Work are free of hazardous materials and substances.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes requirements for the Contractor's insurance.

1.02 SUBMITTAL REQUIREMENTS

- A. Evidence of the required insurance within ten (10) days of the issued Notice of Award to the Contractor.
- B. Updated evidence of insurance as required until final completion.

1.03 COMMERCIAL GENERAL LIABILITY (CGL) INSURANCE

- A. The Contractor shall secure and maintain until Final Completion, at its sole cost and expense, the following insurance in carriers reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC six (6)" or better.
- B. The Port of Tacoma (Port) will be included as additional insureds for both ongoing and completed operations by endorsement to the policy using ISO Form CG 20 10 11 85 or forms CG 20 10 04 13 and CG 20 37 04 13 (or equivalent coverage endorsements). The inclusion of the Port as additional insureds shall not create premium liability for the Port.

Also, by endorsement to the policy, there shall be:

- 1. An express waiver of subrogation in favor of the Port;
 - 2. A cross liabilities clause; and
 - 3. An endorsement stating that the Contractor's policy is primary and not contributory with any insurance carried by the Port.
- C. If the Contractor, Supplier, or Subcontractors will perform any work requiring the use of a licensed professional, per RCW 18, the Contractor shall provide evidence to the Port of professional liability insurance in amounts not less than \$1,000,000.
 - D. This insurance shall cover all of the Contractor's operations, of whatever nature, connected in any way with the Contract, including any operations performed by the Contractor's Subcontractors of any tier. **It is the obligation of the Contractor to ensure that all Subcontractors (at whatever level) carry a similar program that provides the identified types of coverage, limits of liability, inclusion of the Port as additional insured(s), waiver of subrogation and cross liabilities clause.** The Port reserves the right to reject any insurance policy as to company, form, or substance. Contractor's failure to provide, or the Port's acceptance of, the Contractor's certificate of insurance does not waive the Contractor's obligation to comply with the insurance requirements of the Contract as specifically described below:
 - 1. Commercial General Liability Insurance on an Occurrence Form Basis including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Contractual Liability;
 - d. Products - Completed Operations Liability;
 - e. Personal Injury Liability;

Alternatively, a Commercial General Liability (CGL) policy is acceptable if all of the above coverages are incorporated in the policy and there are no marine exclusions that will remove coverage for either vessels or work done by or above or around the water.

2. Comprehensive Automobile Liability including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Personal Injury Liability;
 - d. Owned and Non-Owned Automobile Liability; and
 - e. Hired and Borrowed Automobile Liability.
3. Technology Professional Liability Errors and Omissions Insurance appropriate to the Consultant's profession and work hereunder, with limits not less than \$2,000,000 per occurrence. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by the Vendor in this agreement and shall include, but not be limited to, claims involving infringement of intellectual property, copyright, trademark, invasion of privacy violations, information theft, release of private information, extortion and network security. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties as well as credit monitoring expenses with limits sufficient to respond to these obligations.

The policy shall include, or be endorsed to include, **property damage liability coverage** for damage to, alteration of, loss of, or destruction of electronic data and/or information "property" of the Agency in the care, custody, or control of the Vendor.

- E. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than \$2,000,000 for each occurrence. If the coverage is aggregated, the coverage shall be no less than two times the per occurrence or per claim limit. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. Any additional insured endorsement shall NOT be limited to the amounts specified by this Contract, unless expressly waived in writing by the Port.
- F. Contractor shall certify that its operations are covered by the Washington State Worker's Compensation Fund. The Contractor shall provide its Account Number or, if self-insured, its Certificate of Qualification Number. The Contractor shall also provide evidence of Stop-Gap Employers' Liability Insurance.
- G. The Contractor shall furnish, within ten (10) days following issuance of the Notice of Award, a certificate of insurance satisfactory to the Port evidencing that insurance in the types and minimum amounts required by the Contract Documents has been secured. The Certificate of Insurance shall be signed by an authorized representative of the insurer together with a copy of the endorsement, which shows that the Port are named as additional insured(s).
- H. Contractor shall provide at least forty-five (45) days prior written notice to the Port of any termination or material change, or ten (10) day's-notice in the case of non-payment of premium(s).
- I. If the Contractor is required to make corrections to the Work after Final Completion, the Contractor shall obtain at its own expense, prior to the commencement of any corrective work, insurance coverage as required by the Contract Documents, which coverage shall be maintained until the corrections to the Work have been completed and accepted by the Port.

1.04 BUILDER'S RISK INSURANCE

- A. Until Final Completion of the Work, the construction Work is at the risk of the Contractor and no partial payment shall constitute acceptance of the Work or relieve the Contractor of responsibility of completing the Work under the Contract.
- B. To the extent the Work provided under this Contract does not include the construction, rehabilitation or repair of any dam, road or bridge, and whenever the estimated cost of the Work is less than \$25,000,000, the Port and Contractor acknowledge that the Port will purchase, or has purchased, from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (including Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Without further endorsement, the coverage afforded by this insurance includes the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor. All tools and equipment not intended as part of the construction or installation (including but not limited to Contractor's equipment and tools) will NOT be covered by the policy.

To the extent the Work provided under this Contract involves any dam, roadway or bridge, the value of which exceeds \$250,000, or whenever the estimated cost of the Work is equal to or greater than \$25,000,000, Contractor will purchase from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (excluding Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This Builder's Risk insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Contractor shall provide evidence satisfactory to the Port confirming the coverage afforded by this insurance shall include the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy purchased by the Contractor. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor.

In all instances, the Contractor shall obtain property insurance for all Contractor-owned equipment and tools and, in the event of loss, payment of any deductible amount shall be the responsibility of the Contractor.

PART 2 - PRODUCTS - NOT USED

PART 3 - PRODUCTS - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 PREVAILING AND OTHER REQUIRED WAGES

- A. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project.
- B. Pursuant to RCW 39.12, "Prevailing Wages on Public Works," no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the "prevailing rate of wage" in effect as of the date that bids are due.
 - 1. Based on the Bid Date, the applicable effective date for prevailing wages for this Project is April 14th, 2022.
- C. The State of Washington prevailing wage rates applicable for this public works Project, which is located in Pierce County, may be found at the following website address of the Department of Labor and Industries:

<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>
- D. The schedule of the prevailing wage rates is made a part of the Contract Documents by reference as though fully set forth herein, and a printed copy of the applicable prevailing wage rates are also available for viewing at the Port Administration Building, located at 1 Sitcum Plaza, Tacoma, WA 98421 (253-383-5841). Upon request to the Procurement Department at procurement@portoftacoma.com, the Port will email or mail a hard copy of the applicable Journey Level prevailing wages for this Project.
- E. Questions relating to prevailing wage data should be addressed to the Industrial Statistician.

Mailing Address: Washington State Department of Labor and Industries
Prevailing Wage Office
P.O. Box 44540
Olympia, WA 98504

Telephone: (360) 902-5335

Facsimile: (360) 902-5300

 - 1. If there is any discrepancy between the provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, the applicable published rates shall apply with no increase in the Contract Sum. It is the Contractor's responsibility to ensure that the correct prevailing wage rates are paid.
- F. Statement to Pay Prevailing Wages
 - 1. Prior to any payment being made by the Port under this Contract, the Contractor, and each Subcontractor of any tier, shall file a Statement of Intent to Pay Prevailing Wages with the Department of Labor and Industries for approval.
 - 2. The statement shall include the hourly wage rate to be paid to each classification of workers entitled to prevailing wages, which shall not be less than the prevailing rate of wage, and the estimated number of workers in each classification employed on the Project by the Contractor or a Subcontractor of any tier, as well as the Contractor's contractor registration number and other information required by the Department of Labor and Industries.
 - 3. The statement, and any supplemental statements, shall be filed in accordance with the requirements of the Department of Labor and Industries. No progress payment shall be made until the Port receives such certified statement.

- G. The Contractor shall post, in a location readily visible to workers, at the Project site: (i) a copy of the Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician of the Department of Labor and Industries and (ii) the address and telephone number of the Industrial Statistician of the Department of Labor and Industries to whom a complaint or inquiry concerning prevailing wages may be directed.
- H. If a State of Washington prevailing wage rate conflicts with another applicable wage rate (such as Davis-Bacon Act wage rate) for the same labor classification, the higher of the two shall govern.
- I. Pursuant to RCW 39.12.060, if any dispute arises concerning the appropriate prevailing wage rate for work of a similar nature, and the dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries, and his or her decision shall be final and conclusive and binding on all parties involved in the dispute.
- J. Immediately following the end of all Work completed under this Contract, the Contractor and each Subcontractor of any tier, shall file an approved Affidavit of Wages Paid with the Department of Labor and Industries.
- K. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct, indirect, including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or RCW Title 51 ("Industrial Insurance"), including, but not limited to, RCW 51.12.050.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 REQUIREMENTS APPLICABLE PORT-WIDE

- A. The Contractor shall submit, prior to the start of Work, a list of emergency contact numbers for itself and its Subcontractors, Suppliers, and manufacturer representatives. Each person on the Project site shall have a valid identification card that is tamper proof with laminated photo identification, such as one (1) of the following:
1. State-issued Driver's license (also required if driving a vehicle)
 2. Card issued by a governmental agency
 3. Passport
 4. Pacific Maritime Association card
 5. Labor organization identification card
- B. Identification cards shall be visible while on the Project site or easily displayed when requested.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SCOPE

- A. The accompanying Drawings and Specifications show and describe the location and type of Work to be performed under this project. Work is more specifically defined on the drawings listed in Section 00 01 15.
 - 1. The Building 326 Storefront Window Replacement, Partition Bracing and Isolated Siding Painting project consists of: existing storefront window and sliding glass door demolition and disposal, asbestos abatement as required, furnishing and installing new storefront window and sliding glass door assemblies, and all associated framing, joint sealants, flashing and weather sealing for complete installation. The Work includes installation of metal framing partition braces, including all preparatory and clean-up work. The Work under this contract is to provide, furnish and install all labor, materials and equipment required to complete the work, installed, tested, and ready for use, and as described in these documents.

1.02 LOCATION

- A. The work is located at:
 - 401 E Alexander Ave Bldg 326
 - Tacoma, WA 98421

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies work sequence and constraints.
- B. The purpose of the milestones, sequence and limitations of construction are to ensure that the Contractor understands the requirements and limitations on its work by the specific characteristics of the Contract, schedules and conducts work in a manner consistent with achieving these purposes, and complies with the construction schedule, the specific sequence, constraints, milestones and limitations of work specified.
- C. Sequence of construction. Plan the sequence of construction to accommodate all the requirements of the specifications. The Contract Price shall include all specified requirements as described in this Section.

1.02 CONTRACTOR ACCESS AND USE OF PREMISES

- A. Activity Regulations
 - 1. Ensure Contractor personnel deployed to the project become familiar with and follow all regulations or restrictions established by the Engineer.
- B. Occupied Building
 - 1. The Contractor will be working in existing buildings which are occupied during normal business hours, as stipulated below.
 - 2. Protect materials and equipment in areas adjoining the immediate work area.
 - 3. Storefront Windows and Sliding Door Work
 - a. The Center Courtyard shall be accessible to the Contractor for a period of 35 days, 24 hours per day and 7 days per week. Office personnel impacted by the Work shall either be relocated or work in the construction area as coordinated through the Engineer.
 - b. Work areas shall be weather tight at the end of each work day.
 - 4. Partition Bracing Work
 - a. All partition bracing work shall be completed between 4pm and 6am Monday through Friday, or on Saturdays or Sundays with the following exception:
 - 1) Partition bracing work in the operational control room as shown in the Drawings shall be completed on Saturdays or Sundays.
 - b. Occupancy and use of the building varies by tenant. Work may proceed outside stipulated hours at the discretion of the Engineer.
- C. Work Site Regulations
 - 1. Keep within the limits of work and assigned avenues of ingress and egress. Do not enter any areas outside the designated work location unless previously approved by the Engineer. The Contractor must comply with the following conditions:
 - a. Restore all common areas to a clean and useable condition that permits the resumption of Tenant operations after the Contractor ceases daily work.

- b. Be responsible for control and security of Contractor-owned equipment and materials at the work site. Report to Port Security (phone (253) 383-9472) any missing/lost/stolen property.
- c. Ensure all materials, tools and equipment will be removed from the site or secured within the designated laydown area at the end of each shift.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Procedures for preparation and submittal of applications for progress payments.

1.02 PAYMENT PROCEDURES

- A. Monthly pay estimates shall clearly identify the work performed for the given time period based on the approved Schedule of Values.
 - 1. At the Pre-construction meeting, the Engineer and the Contractor shall agree upon a date each month when payment applications shall be submitted.
- B. For each pay estimate the Contractor shall submit the following:
 - 1. Completed Contractor invoice and updated Schedule of Values tracking sheet as required by Division 01 or as established by the Engineer.
 - 2. Baseline Project Schedule and narrative updated as required by Section 01 32 16 of the Project Manual.
 - 3. Completed "Amounts Paid to Subcontracts and Suppliers" showing total contract amount, amount paid this estimate, total paid to date, and balance owing.
 - 4. Completed "Conditional Release and Waiver of Liens and Claims."
 - 5. An estimated cashflow statement projecting the Contractor's monthly billings on the project shall be submitted with each payment application.
- C. Prior to submitting a payment application, the Contractor and Engineer shall meet each month to review the work accomplished to determine the actual quantities including labor, materials and equipment charges to be billed.
 - 1. Prior to the payment application meeting, the Contractor shall submit to the Engineer all measurement documentation as referenced in these contract documents; to include all measurement by weight, volume or field.
 - 2. For all change work being done on a force account basis, the Contractor shall submit prior to meeting with Engineer all Force Account back-up documentation as required to process the payment application where Force Account work is being billed. The Engineer and the Contractor shall review the documentation at the payment application meeting to verify quantities and review the work accomplished.
 - 3. The Contractor shall bring a copy of all documentation to the pay application meeting with the Engineer.
 - 4. The Contractor shall submit the updated baseline project schedule for review prior to submitting the payment application to ensure the payment processing is not held up due to necessary schedule revisions.
- D. Following the Engineers' review, the Contractor shall submit the agreed upon pay estimate electronically, with complete supporting documentation, using e-Builder®.

1.03 PAYMENT PRICING

- A. Pricing for the various lump sum or unit prices in the Bid Form, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work in accordance with the requirements of the Contract Documents.

- B. Pricing also includes all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- C. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.
- D. All other work not specifically mentioned in the measurement and payment sections identified below shall be considered incidental to the work performed and merged into the various unit and lump sum prices bid. Payment for work under one item will not be paid for under any other item.
- E. The Port of Tacoma reserves the right to make changes should unforeseen conditions necessitate such changes. Where work is on a unit price basis, the actual quantities occasioned by such changes shall govern the compensation.

1.04 LUMP SUM MEASUREMENT

- A. Lump sum measurement will be for the entire item, unit of Work, structure, or combination thereof, as specified and as indicated in the Contractor's submitted bid.
 - 1. If the Contractor requests progress payments for lump sum items, such progress payments will be made in accordance with an approved Schedule of Values. The quantity for payment for completed work shall be an estimated percentage of the lump sum amount, agreed to between the Engineer and Contractor, payable in monthly progress payments in increments proportional to the work performed in amounts as agreed between the Engineer and the Contractor.

1.05 MEASUREMENT OF QUANTITIES FOR UNIT PRICES

- A. Measurement Standards:
 - 1. All Work to be paid for at a contract price per unit measurement, as indicated in the Contractor's submitted bid, will be measured by the Engineer in accordance with United States Standard Measures.
- B. Measurement by Weight:
 - 1. Reinforcing steel, steel shapes, castings, miscellaneous metal, metal fabrications, and similar items to be paid for by weight shall be measured by scale or by handbook weights for the type and quantity of material actually furnished and incorporated into the Work.
 - 2. Unless shipped by rail, material to be measured and paid for by weight shall be weighed on sealed scales regularly inspected by the Washington State Department of Agriculture's Weights and Measures Section or its designated representative. Measurement shall be furnished by and at the expense of the Contractor. All weighing, measuring, and metering devices shall be suitable for the purpose intended and shall conform to the tolerances and specifications as outlined in Washington State Department of Transportation Standard Specifications, Division 1, General Requirements, Article 1-09.2, Weighing Equipment.
 - 3. Provide or utilize platform scales of sufficient size and capacity to permit the entire vehicle or combination of vehicles to rest on the scale platform while being weighed. Combination vehicles may be weighed as separate units provided they are disconnected while being weighed. Scales shall be inspected and certified as often as the Engineer may deem necessary to ascertain accuracy. Costs incurred as a result of regulating, adjusting, testing, inspecting, and certifying scales shall be borne by the Contractor.

4. A licensed weighmaster shall weigh all Contractor-furnished materials. The Engineer may be present to witness the weighing and to check and compile the daily record of such scale weights. However, in any case, the Engineer will require that the Contractor furnish weight slips and daily summary weigh sheets. In such cases, furnish a duplicate weight slip or a load slip for each vehicle weighed, and deliver the slip to the Engineer at the point of delivery of the material.
 5. If the material is shipped by rail, the certified car weights will be accepted, provided only actual weight of material will be paid for and not minimum car weights used for assessing freight tariff. Car weights will not be acceptable for material to be passed through mixing plants. Material to be measured by weight shall be weighed separately for each bid item under which it is to be paid.
 6. Trucks used to haul material being paid for by weight shall be weighed empty daily and at such additional times as the Engineer may require. Each truck shall bear a plainly legible identification mark. The Engineer may require the weight of the material be verified by weighing empty and loaded trucks on such other scales as the Engineer may designate.
- C. Measurement by Volume:
1. Measurement by volume will be by the cubic dimension indicated in the Contractor's submitted bid. Method of volume measurement will be by the unit volume in place or removed as shown on the Contract Drawings or as specified.
 2. When material is to be measured and paid for on a volume basis and it is impractical to determine the volume by the specified method of measurement, or when requested by the Contractor in writing and accepted by the Engineer in writing, the material may be weighed in accordance with the requirements specified for weight measurement. Such weights will be converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Resident Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities will be accepted.
- D. Measurement by Area: Measurement by area will be by the square dimension shown on the Contract Drawings or as specified. Method of square measurement will be as specified.
- E. Linear Measurement: Linear measurement will be by the linear dimension listed or indicated in the Contractor's submitted bid. Unless otherwise indicated, items, components, or Work to be measured on a linear basis will be measured at the centerline of the item in place.
- F. Field Measurement for Payment:
1. The Contractor shall take all measurements by providing equipment, workers, and survey crews as required to measure quantities in accordance with the provisions for measurement specified herein. No allowance will be made for specified tolerances.
 2. The Engineer will verify all quantities of Work performed by the Contractor on a unit-price basis, for progress payment purposes.

1.06 REJECTED, EXCESS, OR WASTED MATERIALS

- A. Quantities of material wasted or disposed of in a manner not called for under the Contract; rejected loads of material, including material rejected after it has been placed by reasons of the failure of the Contractor to conform to the provisions of the Contract; material not unloaded from the transporting vehicle; material placed outside the lines indicated on the Contract Drawings or established by the Engineer; or material remaining on hand after completion of the Work, will not be paid for, and such quantities shall not be included in the final total quantities. No additional compensation will be permitted for loading, hauling, and disposing of rejected material.

1.07 MEASUREMENT AND PAYMENT

A. Item #1: Mobilization and Demobilization

- 1. Payment for Mobilization and Demobilization shall be for preparatory work and operations performed by the Contractor including, but not limited to, those necessary for the movement of its personnel, equipment, supplies and incidentals to and from the project site; temporary facilities and controls; for the establishment and removal of its offices, buildings and other facilities necessary for work on the project; for other work and operations which it must perform or costs it must incur before beginning production work on the various items on the project site, and for removal of personnel, equipment, supplies, offices, building facilities, sheds, fencing, and other incidentals from the site.
- 2. Mobilization and Demobilization shall be paid at the lump sum price listed in the Contractor's submitted bid. Incremental payment shall be made for each location as follows:
 - a. 40% after completion of 5% of the total contract amount of other bid items have been earned.
 - b. 40% after completion of 20% of the total contract amount of other bid items have been earned.
 - c. 20% after completion of all work on the project has been completed, including cleanup and acceptance of the project by the Port.

B. Item #2: Project Administration

- 1. Item Description: The Work of this item includes all administrative costs associated with administering and supervising the project including, but not limited to supervision of personnel, coordination of all work activities, coordination of subcontractors and/or suppliers, preparation and transmittal of submittals, permit acquisitions, for premiums on bonds and insurance for the project, and project overhead.
- 2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
- 3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

C. Item #3: Demolish, Furnish and Install Storefront Windows and Sliding Glass Door Assemblies

- 1. Item Description: The Work of this item includes all tools, labor and material as required to demolish and dispose of the existing storefront and sliding door assemblies, abatement as required, temporary weatherproofing, all tools, labor and material as required to furnish and install new storefront and sliding glass assemblies, as well as associated framing, trim, sealants, flashing and restorative works to produce a complete assembly.

- a. It shall be the Contractor's responsibility to determine if asbestos abatement is required due to the need to disturb ACM identified in the Hazardous Building Materials survey report associated with this project. The storefront Work is time sensitive and based on a disturbance period agreed upon with the Port's current tenant as specified in Section 01 14 00 - Work Restrictions. The requirements of Section 02 82 00 - Asbestos Abatement shall be satisfied within the specified work window.
 2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
 3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.
- D. Item #4: Wall Bracing.
1. Item Description: The Work of this item includes all labor, tools and materials to install metal framing wall braces as indicated in the Drawings. This work includes all preparatory work to access partition walls and cleaning to restore impacted areas.
 2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
 3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.
- E. Item #5: Unforeseen Conditions Allowance
1. This allowance will be for UNFORESEEN CONDITIONS for work unidentified at the time of bid and will be paid preferably as negotiated unit price(s) or lump sum(s). If unit prices or lump sums cannot be established, work will be paid on a time and materials basis per Section 00 72 00 General Conditions Article 8.0. Work under this bid item will be accomplished upon written direction of the Engineer as a Minor Change in Work. This entire bid item may or may not be used.
 2. UNFORESEEN CONDITIONS ALLOWANCE will be paid at the price agreed upon for each Minor Change in Work issued by the Engineer. The measurement for payment will depend on the method agreed upon for each Minor Change issued. For longer duration changes incremental payment for completed work shall be a percentage, determined by the Engineer, payable in monthly progress payments, proportional to the work completed.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.02 SUBMITTALS

- A. The Contractor shall submit for approval the following documentation to the Port for force account change orders:
 - 1. List of Labor Rates
 - a. For the Contractor and each subcontractor, a list of labor rates for each trade applicable to the scope of work to be performed. These submitted rates shall be broken down to include the base wage, fringes, FICA, SUTA, FUTA, industrial insurance, and medical aid premiums as stated in the General Conditions. The rates shall not contain any travel time, safety, loss efficiency factors, overhead, or profit. Rates shall be submitted for straight time, overtime, and double time in a form acceptable to the Engineer. Contractor shall provide proof of all labor rate costs as required by the Engineer, including the submission of a copy of the most current Workers Compensation Rate Notice from Labor & Industries and a copy of the Unemployment Insurance Tax Rate notice from the Employment Security Department.
 - 1) If labor rates change during the course of the project or additional labor rates become required to complete the work, the Contractor shall submit new rates for approval.
 - 2. List of Equipment.
 - a. Submit for the Contractor and each subcontractor, a list of equipment and rates applicable to the scope of work to be performed. The equipment rates shall conform to the rates shown on Equipment Watch. A separate page from equipment watch detailing the hourly rate shall be submitted as backup documentation for each piece of equipment.
 - 1) If the list of equipment and/or equipment rates changes during the course of the project or additional equipment becomes required to complete the work, the Contractor shall submit a new list and rates for approval.

1.03 METHOD TO CALCULATE ADJUSTMENTS TO CONTRACT PRICE

- A. One of the following methods shall be used:
 - 1. Unit Price Method;
 - 2. Firm Fixed Price Method (Lump Sum); or,
 - 3. Time and Materials Method (Force Account).
- B. The Port preferred methods are firm fixed price or unit prices.

1.04 MINOR CHANGES IN THE WORK

- A. Engineer will issue a written directive authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.05 PROPOSAL REQUESTS

- A. Port-Initiated Proposal Requests: The Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Work Change Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.
 2. Contractor shall submit a written proposal within the time specified in the General Conditions. The proposal shall represent the Contractor's offer to perform the requested work, and the pricing set forth within the proposal shall represent full, complete, and final compensation for the proposed change and any impacts to any other Contract Work, including any adjustments in the Contract Time.
 - a. Include a breakdown of the changed work in sufficient detail that permits the Engineer to substantiate the costs.
 - 1) Generally, the cost breakdown should be divided into the time and materials categories listed in the General Conditions under Article 8.02.B for either Lump Sum Proposals or Force Account Proposals.
 - 2) For Unit Price Proposals, include the quantity and description of all work involved in the unit pricing being proposed, along with a not to exceed total cost.
 - b. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or differing site conditions require modifications to the Contract, the Contractor may initiate a claim by submitting a request for a change to the Engineer.
1. Notify the Engineer immediately upon finding differing conditions prior to disturbing the site.
 2. Provide follow-up written notification and differing site conditions proposal within the time frames set forth in the General Conditions.
 3. Provide the differing site condition change proposal in the same or similar manner as described above under 1.05.A.
 4. Comply with requirements in Section 00 26 00 Substitution Procedures if the proposed change requires substitution of one product or system for product or system specified.
 5. Proposal Request Form: Use form acceptable to Engineer.

1.06 PROCEEDING WITH CHANGED WORK

- A. The Engineer may issue a directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order per the General Conditions, Article 8.01.E.
1. The directive will contain a description of change in the Work and a not-to-exceed amount. It will designate the method to be followed to determine the change in the Contract Sum or the Contract Time.

1.07 CHANGE ORDER PROCEDURES

- A. Issuance of Change Order

1. On approval of the Contractor's proposal, and following successful negotiations, the Engineer will issue a Change Order for signature by the Contractor and execution by the Engineer.
 - a. The Contractor shall sign and return the Change Order to the Engineer within **four (4) days** following receipt of the Change Order from the Engineer. If the Contractor fails to return the signed Change Order within the allotted time, the Engineer may issue a Unilateral Change Directive.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes specifications for preparation, format, and submittal of Schedule of Values.
- B. The Schedule of Values will establish unit prices for individual items of work.
- C. The Schedule of Values will be the basis for payment of contract work.

1.02 PREPARATION

- A. To facilitate monthly pay requests, develop the Schedule of Values based on the Contractor's submitted Bid Items. The Schedule of Values shall be used to provide an allocation of the Work for measurement and payment to a level of detail to ensure accurate payment for the Work accomplished. The Schedule of Values is based on unit priced bid items and a breakdown of each lump-sum bid item. The total dollars for the Schedule of Values shall total the bid amount.
- B. Obtain the agreement of the Engineer on the Schedule of Values. No payment will be made prior to an agreed upon Schedule of Values.
- C. Include an updated version of the Schedule of Values as changes occur. Update the Schedule of Values to include:
 - 1. Dollars earned and percent complete for the current progress payment period,
 - 2. Dollars earned and percent complete to-date, excluding the current progress payment period,
 - 3. Total dollars earned and percent complete to-date,
 - 4. Total dollars remaining, and
 - 5. Changes resulting from Change Orders.
- D. The total value of the line items in the Schedule of Values plus any approved Change Orders shall be equal to the current approved contract price.
- E. The value of stored material shall be identified in the Schedule of Values with both a material-purchase activity and a separate corresponding installation activity in the Construction Schedule(s).
- F. Include as exhibits, drawings or sketches as necessary, to better define the limits of pay items that are in close proximity and that have no clear boundary in the Contract Drawings.

1.03 SUBMITTAL

- A. Submit preliminary Schedule of Values within 10 days of the effective date of the Notice to Proceed.
- B. Submit corrected Schedule of Values within 10 days upon receipt of reviewed Schedule of Values.
- C. At the Engineer's request, submit documentation substantiating the cost allocations for line items within the Schedule of Values.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SCHEDULE OF VALUES

- A. Submit the Schedule of Values in a form acceptable to the Engineer.
- B. Provide updated Schedule of Values as required by the Engineer and as indicated in the Contract Documents.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The purpose of this section is to provide the framework for communication between the Port and the Contractor by defining the types and timing of administrative tasks, including meetings and other items related to communications.

1.02 NOTICE TO PROCEED

- A. Contract execution will be made per the requirements of the Contract Documents. Once the contract has been executed and all pre-work submittals have been received, the Engineer will issue a Notice to Proceed (NTP).
 - 1. In certain instances, the Engineer may issue to the Contractor a Limited NTP for specified elements of the work described in these Contract Documents.
- B. The Contractor shall submit all pre-work submittals within 14 days of contract execution.
 - 1. No contract time extension shall be granted for any delays in issuance of the NTP by the Engineer due to the Contractor's failure to provide acceptable submittals required by the Contract Documents.

1.03 COORDINATION

- A. The Contractor shall coordinate all its activities through the Engineer.
- B. The Contractor shall coordinate construction operations as required to execute the Work efficiently, to obtain the best results where installation of one part of the Work depends on other portions.

1.04 PROJECT MEETINGS

- A. Pre-Construction Meeting
 - 1. After execution of the contract, but prior to commencement of any work at the site, a mandatory one time meeting will be scheduled by the Engineer to discuss and develop a mutual understanding relative to the administration of the safety program, preparation of the Schedule of Values, change orders, RFI's, submittals, scheduling prosecution of the work. Major subcontractors who will engage in the work shall attend.
 - 2. Suggested Agenda: The agenda will include items of significance to the project.
 - 3. Location of the Pre-Construction Meeting will be held at the Port of Tacoma Administration Building located at One Sitcum Plaza.
- B. Weekly Progress Meetings – Progress meetings include the Contractor, Engineer, consultants and others affected by decisions made.
 - 1. The Engineer will arrange meetings, prepare standard agenda with copies for participants, preside at meetings, record minutes and distribute copies within ten working days to the Contractor, meeting participants, and others affected by decisions made.
 - a. The Engineer will approve submitted meeting minutes in writing within 10 working days.
 - 2. Attendance is required for the Contractor's job superintendent, major subcontractors and suppliers, Engineer, and representatives of the Port as appropriate to the agenda topics for each meeting.
 - 3. Standard Agenda

- a. Review minutes of previous meeting
- b. Review of work progress
- c. Field observations, problems, and decisions
- d. Identification of problems that impede planned progress
- e. Maintenance of Progress Schedule (3 weeks ahead; 1 week back)
- f. Corrective measures to regain projected schedules
- g. Planned progress during succeeding work period
- h. Coordination of projected progress
- i. Maintenance of quality and work standards
- j. Effect of proposed changes on progress schedule and coordination
- k. Demonstration that the project record drawings are up-to-date
- l. Other business relating to the work

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. The Port and Contractor shall use the Port Contract Management application (e-Builder®) for electronic information exchange throughout the duration of the Contract, as later described.
 - 1. e-Builder® is a web-based application accessed via the web.
 - 2. The Contractor will receive up to two separate user accounts for access to e-Builder®.
 - 3. The joint use of this system is to facilitate and coordinate the electronic exchange of Requests for Information, Submittals, Change Order Proposals, Pay Applications, and project specific correspondence.

1.02 USER ACCESS LIMITATIONS

- A. Contractor's access to e-Builder® is granted and controlled by the Engineer.
 - 1. The users assigned by the Contractor to use e-Builder® shall be competent and experienced with the practices commonly employed in the industry for electronically submitting requests for information, submittals, product data, shop drawings and related items as required by the contract and the methods commonly used for project correspondence transmission and filing.
 - 2. Any users assigned by the Contractor whom the Engineer determines is incapable of performing the prescribed tasks in an accurate, competent and efficient manner will be removed upon request from the Engineer. The qualifications and identity of a replacement user shall be submitted within 24 hours for consideration by the Engineer. Once accepted by the Engineer, the user account will be modified accordingly.

1.03 CONTRACTOR TECHNOLOGY REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining web enabled devices capable of running the desktop version of the e-Builder® website effectively.

1.04 CONTRACTOR SOFTWARE REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining the following:
 - 1. An office suite that is Microsoft Office 2013 compatible for generation and manipulation of correspondence.
 - 2. A program capable of editing, annotating and manipulating Adobe pdf files for inserting the Contractor's review stamp, clouding and adding notation to the files as necessary for review by the Engineer.

1.05 CONTRACTOR RESPONSIBILITY

- A. Provide all the equipment, internet connections, software, personnel and expertise required to support the use of e-Builder® as described in the Contract documents.

1.06 PORT RESPONSIBILITY

- A. Provide the Contractor with the following:
 - 1. All forms necessary for application to obtain permissions to access e-Builder® as described above.
 - 2. Information, basic user guides and requirements on methods for using e-Builder®.
 - 3. Instruction for the Contractor's staff utilizing e-Builder®.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 UTILIZATION OF E-BUILDER®

- A. The Contractor shall provide required information in a timely manner that also supports the project schedule and meets the requirements of the Contract.
- B. The Contractor shall provide and maintain competent and qualified personnel to perform the various tasks required to support the work within e-Builder®.
- C. The Port will not be liable for any delays associated from the usage of e-Builder® including, but not limited to: slow response time, Port maintenance and off-line periods, connectivity problems or loss of information. Under no circumstances shall the usage of e-Builder® software be grounds for a time extension or cost adjustment to the contract.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide a preliminary schedule and construction progress schedule, bar chart type.

1.02 SUBMITTALS

- A. Within 10 days following execution of the contract, submit a baseline project schedule defining planned operations.
- B. If the baseline project schedule requires revision after review, submit revised baseline project schedule within 10 days.
- C. Within 20 days after review of baseline project schedule, submit draft of proposed complete baseline project schedule for review.
- D. Submit updated progress schedule monthly to the Engineer with each pay application as required in Section 01 20 00 Price and Payment Procedures.

1.03 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel or Consultant specializing in Critical Path Method (CPM) scheduling with one year's minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.04 SCHEDULE FORMAT

- A. The baseline project schedule shall be produced using the CPM format.
- B. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- C. Sheet Size: Multiples of 11 x 17 (280 x 432 mm).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 BASELINE SCHEDULE

- A. Prepare baseline project schedule in the form of a horizontal bar chart.
- B. The baseline project schedule shall include all the activities listed in the Schedule of Values and be directly related to items listed in the Bid Form. The Contractor is encouraged to add sufficient activities to facilitate a clear understanding of the means and methods planned for the various work items.
- C. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction and critical path. At a minimum it shall include and show the following:
 - 1. A time scale showing the elementary work items needed to complete the work;
 - 2. Estimated time durations for each activity, defined as any single identifiable work step within the project;
 - 3. A graphical network diagram showing the logical sequence of activities, their precedence relationships, and estimated float or leeway available for each;

4. The different categories of work as distinguished by crew requirements, equipment requirements, and construction materials; and
 5. The different areas of responsibility, such as distinctly separate or subcontracted work, and identifiable subdivisions of work.
- D. It shall be maintained and updated as necessary to accurately reflect past progress and the most probable future progress.
- E. Activities shown shall include submittals, milestones, and sufficient task breakdown for major components of work.
- F. Identify work of separate stages and other logically grouped activities.
- G. Provide sub-schedules to define critical portions of the entire schedule.
- H. Provide separate schedule of submittal dates for shop drawings, product data, samples, owner-furnished products, products identified, and dates reviewed submittals will be required from the Engineer. Indicate decision dates for selection of finishes.

3.02 PROGRESS SCHEDULE

- A. From the regularly-maintained baseline project schedule, progress schedules showing a three-week look-ahead, one-week look-back, shall be submitted and distributed at the weekly progress meetings. The progress schedule shall represent a practical plan to complete the work shown within the contract work window presented. At a minimum, the presentation, typically a Gantt-style chart, shall convey the task durations, a logical work sequence, task interdependencies, and identify important or critical constraints.
- B. Submittal and distribution of progress schedules will be understood to be the Contractor's representation that the scheduled work meets the requirements of the contract documents and that the work will be executed in the manner and sequence presented, and over the durations indicated.
- C. The scheduling, coordination, and execution of construction in accordance with the contract documents are the responsibility of the Contractor. The Contractor shall involve, coordinate, and resolve scheduling with all subcontractors, material suppliers, or others affected in development of the progress schedules.
- D. The progress schedule shall be used for coordination purposes for inspection and testing purposes as well as validation of work progress against the baseline schedule.

3.03 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Indicate changes required to maintain Date of Substantial Completion.
- E. Submit reports required to support recommended changes.
- F. Contractor shall submit an updated progress schedule with each pay application and include a written narrative describing the overall progress of the work. The narrative shall include the following key aspects:
1. Progress in the last period.

2. Critical Path progress and schedule concerns.
3. Changes to schedule logic or sequencing of the work.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide a submittal log and project submittals.

1.02 SUBMITTAL LOG

- A. Contractor shall, within 14 days of contract execution prepare and submit for Engineer approval a detailed log of all the submittals required under this Contract, along with any other submittals identified by the Port or Contractor. The log shall include, but not be limited to, schedules, required construction Work plans, equipment and material cut sheets, shop drawings, project record documents, test results, survey records, record drawings, results of QC testing, and all other items for which a submittal is required. The submittal log shall be organized by CSI Specification Division, and Section number and include the following information:
1. Item Description
 2. Category
 3. Specification Section information of the applicable section
 4. After the submittal log is reviewed and approved by the Engineer, it shall become the basis for the submittal of all items by Contractor.

1.03 COMPLIANCE

- A. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.04 SHOP DRAWINGS AND MANUFACTURERS' LITERATURE

- A. The Port will not accept shop drawings that prohibit the Port from making copies for its own use.
- B. Shop drawings shall be prepared accurately and to a scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the Work.
- C. All drawings submitted to the Engineer for approval shall be drawn to scale as ANSI D.
- D. Required electronic formats for these drawings are as follows:
1. AutoCad DWG
 2. PDF - Formatted to print to half-scale using 11x17 paper
- E. Catalog cuts or brochures shall show the type, size, ratings, style, color, manufacturer, and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. General catalogs or partial lists will not be accepted. Manufacturers' original electronic files are required for submitting.

1.05 SUBMITTAL REVIEW

- A. After review of each of Contractor's submittals, the submittal will be returned to Contractor with a form indicating one or more of the following:
1. No Exceptions Taken - Means, accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. But it does not constitute approval or deletion of specified or required items not shown in the partial submittal.

2. Make Corrections Noted - Same as Item 1, except that minor corrections as noted shall be made by Contractor.
 3. Reviewed - Submittal has been reviewed by the Port, does not constitute approval, and the Contractor is responsible for requirements in submittal.
 4. Review as Noted - Submittal has to be reviewed by the Port with comments as noted.
 5. Revise and Resubmit - Means, rejected because of major inconsistencies or errors. Resolve or correct before next submittal.
 6. Rejected - Means, submitted material does not conform to the Contract Documents in a major respect (e.g., wrong material, size, capacity, model, etc.).
- B. Submittals marked "No Exceptions Taken," "Make Corrections Noted," or "Reviewed as Noted" authorizes Contractor to proceed with construction covered by those data sheets or shop drawings with corrections, if any, incorporated.
- C. When submittals or prints of shop drawings have been marked "Revise and Resubmit" or "Rejected," Contractor shall make the necessary corrections and submit required copies. Every revision shall be shown by number, date, and subject in a revision block, and each revised shop drawing shall have its latest revision numbers and items clearly indicated by clouding around the revised areas on the shop drawing.
- D. Submittals authorized by the Engineer do not in any case supersede the Contract Documents. The approval by the Engineer shall not relieve the Contractor from responsibility to conform to the Drawings or Specifications, or correct details when in error, or ensure the proper fit of parts when installed. A favorable review by the Port of shop drawings, method of work, or information regarding material and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for errors therein and shall not be regarded as assumption of risk or liability by the Port or its officers, employees, or representatives. Contractor shall have no claim under the Contract on account of failure or partial failure, or inefficiency or insufficiency of any plan or method of work, or material and equipment so accepted. Favorable review means that the Port has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the material and equipment proposed.
- E. It is considered reasonable that the Contractor's submittals shall be complete and acceptable by at least the second submission of each submittal. The Port reserves the right to deduct monies from payments due Contractor to cover additional costs for review beyond the second submission.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION OF SUBMITTALS

- A. The Contractor shall submit all shop drawings, catalog cuts, brochures and physical samples using e-Builder® (a web based construction management software). All post-document-generated notations such as notes, arrows, stamps, clouding, or other items, are required to be shown directly on the submittal document. **Each submittal shall be accompanied by a transmittal developed within the e-Builder® software.**
- B. A separate submittal shall be prepared for each product or procedure and shall be further identified by referencing the Specification Section and paragraph number and each submittal shall be numbered consecutively.

- C. Product submittals that cannot be accomplished electronically shall be submitted electronically without attachments, marked as being hand delivered, and accompanied by a printed version of a transmittal.
- D. Shop and detail drawings shall be submitted in related packages. All equipment or material details which are interdependent, or are related in any way, must be submitted indicating the complete installation. Submittals shall not be altered once marked "No Exceptions Taken" Revisions shall be clearly marked and dated. Major revisions must be submitted for approval.
- E. The Contractor shall thoroughly review all shop and detail drawings, prior to submittal, to assure coordination with other parts of the work.
- F. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.
- G. All submittal packages including, but not limited to, product data sheets, mix designs, shop drawings and other required information for submittal must be submitted, reviewed and approved before the relevant scheduled task may commence. It is the responsibility of the Contractor to provide the submittal information which may drive a task on the construction schedule to submit items well enough in advance as to provide adequate time for review and comment from the Engineer without adversely impacting the construction schedule.
- H. When completing the e-Builder® submittal form, a Date Due field is required to be completed. This field is intended to inform the Port of the urgency of the submittal. Failure of the Port to return the submittal by the date provided by the Contractor will not be considered grounds for a contract time extension.

3.02 PRE-WORK SUBMITTALS

- A. Prior to issuance of Notice to Proceed, the following submittals must be submitted and returned to the Contractor as No Exceptions Taken, Make Corrections Noted, Reviewed, or Reviewed as Noted.
 - 1. Per 00 72 00 and 01 32 16, Baseline Project Schedule
 - 2. Per 00 73 63, Emergency Contact Numbers
 - 3. Per 01 35 29, Health and Safety Plan (HASP)
 - 4. Per 01 35 29, Spill Prevention and Countermeasures Plan (SPCC)
 - 5. Per 01 35 47, List of equipment and written certification

3.03 MAINTENANCE OF SUBMITTAL LOG

- A. Prepare and submit for Port review a detailed submittal log conforming to the requirements of paragraph 1.02 of this section. When approved by the Engineer, use the submittal log to track the transmittal of submittals to the Engineer, the receipt of submittal comments from the Engineer, and all subsequent action with respect to each submittal. Provide an updated copy of the submittal log to the Engineer during each weekly progress meeting, unless otherwise approved by the Engineer.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. The work includes the requirements for health and safety provisions necessary for all work at the site for this project. The work also includes compliance with all laws, regulations and ordinances with respect to safety, noise, dust, fire and police action, civil disobedience, security or traffic.
- B. Some of the work tasks may place workers in the potential position of coming into contact with regulated building materials, waste, or environmental media. Detailed information regarding the known nature and extent of refuse and regulated materials in the project area is included in Section 00 31 26 Existing Hazardous Material Information.
- C. The Contractor shall monitor site conditions for indications of identified and other potentially hazardous, dangerous, and/or regulated materials (suspicious material). Indicators of suspicious material include, but are not limited to, refuse, oily sheen or coloring on soil or water, or oily or chemical odors. If suspicious materials are encountered, the Contractor shall stop all work in that area and notify the Engineer immediately.

1.02 SUBMITTALS

- A. Prior to Notice to Proceed, the Contractor shall provide a site specific Health and Safety Plan (HASP), which meets all the requirements of local, state and federal laws, rules and regulations. The HASP shall address all requirements for general health and safety and shall include, but not be limited to:
 - 1. Description of work to be performed and anticipated chemical and/or physical hazards associated with the work;
 - 2. Map of the site(s) illustrating the location of the anticipated hazards and areas of control for those hazards (including containments, exclusion/work zones, and contaminant reduction/decontamination zones);
 - 3. Hazardous material inventory and safety data sheets (SDSs) for all chemicals which will be brought on site;
 - 4. Documentation that the necessary workers have completed the required Hazardous Waste Operations and Emergency Response (HAZWOPER) training;
 - 5. Engineering controls/equipment to be used to protect against anticipated hazards;
 - 6. Personal protective equipment and clothing including head, foot, skin, eye, and respiratory protection;
 - 7. Procedures which will be used for:
 - a. Lockout/Tagout,
 - b. Hot work,
 - c. Asbestos and lead hazards,
 - d. Suspicious materials and/or unidentified materials,
 - 8. Site housekeeping procedures and personal hygiene practices;
 - 9. Emergency plan including locations of and route to nearest hospital;
 - 10. Name and qualification of person preparing the HASP and person designated to implement and enforce the HASP;

11. Signatory page for site personnel to acknowledge receipt, understanding, and agreement to comply with the HASP.
- B. Prior to the start of any Work, the Contractor shall provide a site specific Spill Prevention, Control and Countermeasures (SPCC) Plan, which meets all the requirements of local, state and federal laws, rules and regulations.
- C. Contractor may submit the HASP and SPCC Plan as one comprehensive document or may submit the plans as separate documents.
- D. The Contractor shall include in the HASP recent requirements associated with the State's COVID-19 Job Site Requirements as noted at in Appendix B or online at <https://www.governor.wa.gov/sites/default/files/Phase%201%20Construction%20COVID-19%20Safety%20Requirements%20%28final%29.pdf>.

1.03 POTENTIAL CHEMICAL HAZARDS

- A. Site Contaminants
 1. The Contractor must provide site workers with Hazard Communication standard information for potential site contaminants (in accordance with WAC 296-843). The Contractor shall ensure that all site workers are aware of and understand this information. Additional information shall also be provided by the Contractor, as necessary, to meet the Hazard Communication Standard and HASP requirements as noted in WAC 296-901-14010 and 296-843. Workers shall be instructed on basic methods or techniques to assist in detecting suspicious material.
- B. Potential Exposures Routes
 1. Inhalation: Airborne dusts, fibers, particulates, or vapors may be released during site activities. Inhalation of airborne inorganic arsenic may occur.
 2. Skin and Eye Contact: Dusts generated during site work activities may settle on the skin or clothing of site workers. Also, workers may contact potentially regulated sediments, or water, in the normal course of their work. Precautions to prevent skin or eye contact with hazardous materials will be included in the HASP. Arsenic exposure may cause skin irritation.
 3. Ingestion: Inadvertent transfer of site contaminants from hands or other objects to the mouth could occur if site workers eat, drink, smoke, chew tobacco, or engage in similar activities in work areas. This could result in ingestion of site contaminants. Precautions to prevent accidental or inadvertent ingestion of hazardous materials will be included in the HASP.
- C. Chemical hazards may also result from Contractor operations resulting in inadvertent release of fuel, oil, or other chemicals in a manner that would expose workers.

1.04 POTENTIAL PHYSICAL AND OTHER HAZARDS

- A. The Work of the Contractor is described elsewhere in these specifications. Precautions to prevent all anticipated physical and other hazards, including heavy equipment and vessels, shall be addressed in the HASP.
- B. Other anticipated physical hazards:
 1. Heat stress, such as that potentially caused by impermeable clothing (may reduce the cooling ability of the body due to evaporation reduction);

2. Cold stress, such as that potentially caused during times when temperatures are low, winds are high, especially when precipitation occurs during these conditions;
3. Biological hazards, such as mold, insect stings, or bites, poisonous plants (i.e., poison oak, sumac, etc.); and
4. Trips and falls.

PART 2 - PRODUCTS

2.01 SAFETY SIGNAGE

- A. The Contractor shall provide signage at strategic locations within the project site to alert jobsite workers and visitors of the remediation work, associated hazards, and required precautions.

2.02 PRODUCTS SPECIFIED FOR HEALTH AND SAFETY

- A. Provide the equipment and supplies necessary to support the work as described in the site-specific HASP. Equipment and supplies may include, but are not limited to:
 1. All chemicals to be used on site;
 2. A hazardous materials inventory and SDSs for the chemicals brought on site;
 3. Enclosure equipment (for dust and asbestos fiber control);
 4. Fencing and barriers;
 5. Warning signs and labels;
 6. Fire extinguishers;
 7. Equipment to support lockout/tagout procedures;
 8. Personal protective equipment (hard hats, foot gear, skin, eye, and respiratory protection);
 9. Area and personnel exposure monitoring equipment;
 10. Demolition equipment and supplies;
 11. First aid equipment;
 12. Spill response and spill prevention equipment; and

PART 3 - EXECUTION

3.01 WORK AREA PREPARATION

- A. Contractor shall comply with health and safety rules, regulations, ordinances promulgated by the local, state, and federal government, the various construction permits, and other sections of the Contract Documents. Such compliance shall include, but not be specifically limited to: any and all protective devices, equipment and clothing; guards; restraints; locks; latches; switches; and other safety provisions that may be required or necessitated by state and federal safety regulations. The Contractor shall determine the specific requirements for safety provisions and shall have inspections and reports by the appropriate safety authorities to be conducted to ensure compliance with the intent of the regulations.
- B. Contractor shall inform employees, subcontractors and their employees of the potential danger in working with any potentially regulated materials, equipment, soils and groundwater at the project site.

1. The Contractor shall not proceed with jobsite activities that might result in exposure of employees to hazardous materials, including arsenic, until the HASP is reviewed by the Engineer.
- C. All Contractor employees expected to work at the jobsite or individuals entering the jobsite shall read the Contractor HASP before they enter the jobsite, and will sign a statement provided by the Contractor that they have read and understand the HASP. A copy of the Contractor's HASP shall be readily available at the site at all times the work is being performed.
- D. The Contractor's HASP shall be amended as needed by the CIH or CSP to include special work practices warranted by jobsite conditions actually encountered. Special practices could include provisions for decontamination of personnel and equipment, and the use of special equipment not covered in the initial plan.
- E. Contractor shall perform whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees of the Engineer, Engineer's Representative, and Contractor) and property during the Contract period. This requirement applies continuously and is not limited to normal working hours.
- F. The Engineer's review of the Contractor's performance does not include an opinion regarding the adequacy of, or approval of, the Contractor's safety supervisor, the site-specific HASP, safety program or safety measures taken in, on, or near the job site.
- G. Accidents causing death, injury, or damage must be reported immediately to the Engineer and the Port Security Department in person or by telephone or messenger. In addition, promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- H. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing within 24 hours after occurrence, to the Engineer, giving full details of the claim.

3.02 SITE SAFETY AND HEALTH OFFICER

- A. Contractor shall provide a person designated as the Site Safety and Health Officer, who is thoroughly trained in rescue procedures, has a minimum current 40-hour HAZWOPER certification (minimum), and trained to use all necessary safety equipment, air monitoring equipment, and gas detectors. The person must be available and/or present at all times while work is being performed, and conduct testing, as necessary.
- B. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.
- C. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.

3.03 GENERAL SAFETY GUIDELINES FOR HAZARDOUS GASES

- A. The generally accepted procedure to protect the worker from the effects of the dangers from hazardous gases is through the use of four safeguard measures:
 1. Ventilate all confined spaces: Before entry and during the entire time workers are in the confined space. Forced ventilation is the generally accepted procedure.

2. Use appropriate safety equipment: All personnel shall be trained to operate the appropriate safety equipment that are to be utilized during the course of their work. It is the responsibility of the Contractor's Site Safety and Health Officer to ascertain that all safety equipment is being used when appropriate.
3. Provide backup safety personnel: Prior to any personnel entering an excavation or confined space, a separate individual shall be positioned outside the space.

3.04 SPILL PREVENTION AND CONTROL

- A. The Contractor shall be responsible for prevention, containment and cleanup of spilling petroleum and other chemicals/hazardous materials used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.
 - B. The Contractor is advised that discharge of oil, fuel, other petroleum, or any chemicals/hazardous materials from equipment or facilities into state waters or onto adjacent land is not permitted under state water quality regulations.
 - C. In the event of a discharge of oil, fuel or chemicals/hazardous materials into waters, or onto land with a potential for entry into waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of all spilled material and used cleanup materials.
 - D. The Contractor shall, at a minimum, take the following measures regarding spill prevention, containment and cleanup:
 1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums and other equipment and facilities shall be inspected regularly for drips, leaks or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
 2. All land-based chemical, oil and products' storage tanks shall be diked, contained and/or located so as to prevent spills from escaping into the water. Dikes and containment area surfaces shall be lined with impervious material to prevent chemicals or oil from seeping through the ground and dikes.
 3. All visible floating sheen shall be immediately contained with booms, dikes or other appropriate means and removed from the water prior to discharge into state waters. All visible spills on land shall be immediately contained using dikes, straw bales or other appropriate means and removed using sand, sawdust or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed offsite in accordance with applicable local, state and federal regulations.
 4. In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, the Contractor shall immediately notify the Port Security at their listed 24-hour response number:
 - a. Port Security: 253-383-9472
 - E. The Contractor shall maintain the following materials (as a minimum) at each of the project sites:
 1. Oil-absorbent pads or bulk material, adequate for coverage of 40 square feet of surface area;
 2. Oil dry-all, gloves, and plastic bags.
-

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section discloses procedures to follow if unknown regulated materials are encountered.

1.02 NOTIFICATION AND SUSPENSION

- A. In the event the Contractor detects the presence of potentially regulated materials not previously identified in this specification, the Contractor shall stop work and immediately notify the Port. Following such notification by the Contractor, the Port shall in turn notify the various governmental and regulatory agencies concerned with the presence of regulated materials, if warranted. Depending upon the type of materials identified, the Port may suspend work in the vicinity of the discovery under the provisions of General Conditions.
1. Following completion of any further testing necessary to determine the nature of the materials involved, the Port will determine how the material shall be managed. Although the actual procedures used in resuming the work shall depend upon the nature and extent of the regulated material, the following alternate methods of operation are foreseen as possible:
 - a. Contractor to resume work as before the suspension.
 - b. Contractor to move its operations to another portion of the work until measures to eliminate any hazardous conditions can be developed and approved by the appropriate regulatory agencies.
 - c. The Port to direct the Contractor to dispose or treat the material in an approved manner.
 - d. The Port to terminate or modify the Contract accordingly, for unforeseen conditions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. The Work includes the requirements to provide air and noise control measures until Final Completion of the Work.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

- A. The Contractor shall not discharge smoke, dust, and other hazardous materials into the atmosphere that violate local, state or federal regulations.
- B. No vehicles can idle for more than 5 consecutive minutes, except as follows:
 - 1. Idling is required to bring or maintain the equipment to operating temperature;
 - 2. Engine idling is necessary to accomplish work for which the equipment was designed (i.e. operating a crane); or
 - 3. Idling vehicles being used in an emergency or public safety capacity.
- C. The Contractor shall minimize nuisance dust by cleaning, sweeping, vacuum sweeping, sprinkling with water, or other means. Equipment for this operation shall be on the job site or available at all times.

3.02 NOISE CONTROL

- A. The Contractor shall comply with all local controls and noise level rules, regulations and ordinances which apply to work performed pursuant to the Contract.
- B. All internal combustion engines used on the job shall be equipped with a muffler of a type recommended by the manufacturer.

END OF SECTION

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PART 1 - GENERAL

1.01 PERMITS, CODES, AND REGULATIONS

- A. Conform with the requirements of Commercial Alteration Permit #BLDCA22-0031 in Appendix C and additional or other applicable permits, codes, and regulations as may govern the Work.
- B. Obtain and pay fees for licenses, permits, inspections, and approvals required by laws, ordinances, and rules of appropriate governing or approving agencies necessary for proper completion of Work (other than those listed under item 1.01.A above and Special Inspections called for by the International Building Code).
- C. Conform with current applicable codes, regulations and standards, which is the minimum standard of quality for material and workmanship. Provide labor, materials, and equipment necessary for compliance with code requirements or interpretations, although not specifically detailed in Drawings or specifications. Be familiar with applicable codes and standards prior to bidding.
- D. Process through Engineer, request to extend, modify, revise, or renew any of the permits (listed in 1.01.A above). Furnish requests in writing and include a narrative description and adequate Drawings to clearly describe and depict proposed action. Do not contact regulatory agency with requests for permit extensions, modifications, revisions, or renewals without the prior written consent of the Engineer.

1.02 VARIATIONS WITH CODES, REGULATIONS AND STANDARDS

- A. Nothing in the Drawings and specifications permits Work not conforming to codes, permits, or regulations. Promptly submit written notice to the Engineer of observed variations or discrepancies between the Contract Documents and governing codes and regulations.
- B. Appropriate modifications to the Contract Documents will be made by Change Order to incorporate changes to Work resulting from code and/or regulatory requirements. Contractor assumes responsibility for Work contrary to such requirements if Work proceeds without notice.
- C. Contractor is not relieved from complying with requirements of Contract Documents which may exceed, but not conflict with requirements of governing codes.

1.03 COORDINATION WITH REGULATORY AGENCIES

- A. Coordinate Work with appropriate governing or regulating authorities and agencies.
- B. Provide advance notification to proper officials of Project schedule and schedule revisions throughout Project duration, in order to allow proper scheduling of inspection visits at proper stages of Work completion.
- C. Regulation coordination is in addition to inspections conducted by Engineer. Notify Engineer at least 48 hours in advance of scheduled inspections involving outside regulating officials, to allow Engineer to be present for inspections.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to referenced standards.

1.02 QUALITY ASSURANCE

- A. For products or workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue specified in this section, except where a specific date is established by applicable code.
- C. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.
- D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 QUALITY CONTROL FOR COMPLIANCE:

- A. The Contractor shall perform such detailed examination, inspection, quality control and assurance of the Work as to ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents. The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all Work without delay or revision. The Contractor shall be responsible for inspection of portions of the Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no conditions shall a portion of Work proceed prior to preparatory work having been satisfactorily completed. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work and has notified the Contractor (who shall promptly notify the Port in writing) of any defects or imperfections in preparatory work that will, in any way, affect completion of the Work.

1.02 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop Drawings or as instructed by the manufacturer.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.04 TESTING SERVICES

- A. Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities.
 - 1. Neither observations by an inspector retained by the Port, the presence or absence of such inspector at the site, nor inspections, tests, or approvals by others, shall relieve the Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.

- B. Necessary materials testing shall be performed by an independent testing laboratory during the execution of the Work and paid for by the Port of Tacoma, unless otherwise specified. Access to the area necessary to perform the testing and/or to secure the material for testing, shall be provided by the Contractor.
- C. Testing does not relieve Contractor from performing work to contract requirements.
- D. Re-testing required because of non-conformance to specified requirements will be charged to the Contractor by deducting testing charges from the Contract Sum via Change Order.
- E. Material testing for initial material approval will be performed by an independent, certified laboratory and paid for by the Contractor. These tests must be dated within six (6) months of the submittal date.
- F. Subsequent sampling and testing, required as the work progresses to ensure continual control of materials and compliance with all requirements of the Contract documents, shall be the responsibility of the Port, except as required by other sections of these Specifications.

1.05 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up equipment, test, and adjust and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer subject to approval of Engineer.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Temporary utilities,
 - 2. Temporary telecommunications services,
 - 3. Temporary sanitary facilities,
 - 4. Temporary Controls: Barriers, enclosures, and fencing, and
 - 5. Field offices.

1.02 TEMPORARY UTILITIES

- A. Existing facilities electrical outlets may be used.
- B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization. It is the Contractor's responsibility to be able to receive phone calls and emails at the job site.

1.04 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.
- C. At end of construction, return facilities to same or better condition as originally found.

1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for Port's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.07 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from the Port-occupied areas, to prevent penetration of dust and moisture into the Port-occupied areas, and to prevent damage to existing materials and equipment.

- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces

1.08 TREE AND VEGETATION PROTECTION

- A. The Contractor shall carefully protect existing trees and vegetation noted to remain from damage by construction activities.
- B. If a tree or vegetation designated for protection is damaged or destroyed in the course of the Work, the Contractor shall replace it with new comparable in species and size as required by the Engineer. Where it is necessary to replace trees or vegetation damaged by construction, the Contractor shall bear all expenses associated with replacement and establishment of the replacement vegetation.

1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Clean and repair damage caused by installation or use of temporary work.
- B. Restore existing facilities used during construction to original condition.
- C. Restore new permanent facilities used during construction to specified condition.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:

- 1. Parking

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 PREPARATION

- A. Clear areas, provide surface and storm drainage of road, parking, area premises, and adjacent areas.

3.02 ACCESS TO SITE

- A. Provide unimpeded access for emergency vehicles. Maintain 20 foot (6 m) width driveways with turning space between and around combustible materials.
- B. Provide and maintain access to fire hydrants free of obstructions.

3.03 PARKING

- A. All Contractor's employee cars and work vehicles will be parked on-site as designated by the Engineer.

3.04 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Port operations.
- B. Prevent parking on or adjacent to access roads or in non-designated areas.

3.05 MAINTENANCE

- A. Maintain traffic and parking areas in a sound condition free of excavated material, construction equipment, Products, mud, snow, and ice.
- B. Maintain existing paved areas used for construction. Promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

3.06 REMOVAL, REPAIR

- A. Repair existing facilities damaged by use, to original condition.
- B. Repair damage caused by installation.

3.07 PUBLIC STREET AND ONSITE ROADWAY CLEANING

- A. The Contractor shall be responsible for preventing dirt and dust escaping from trucks and other vehicles operating on or departing the project site by sweeping, covering dusty loads, washing truck tires, and all other reasonable methods.
- B. In the event that the above requirements are violated and no action is taken by the Contractor after notification of infraction by the Engineer, the Port reserves the right to have the streets, roadways, and other paved surfaces in question cleaned by others and have the expense of the operation charged to the Contractor.

END OF SECTION

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PART 1 – GENERAL

1.01 SUMMARY

- A. The Work shall consist of planning, installing, inspecting, maintaining and removing Temporary Erosion and Sediment Control (TESC) Best Management Practices (BMPs) to prevent pollution of air and water; and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.
- B. These TESC requirements shall apply to all areas associated with the Work, including but not limited to the following:
 - 1. Work areas;
 - 2. Equipment and material storage areas;
 - 3. Staging areas;
 - 4. Stockpiles; and
 - 5. Discharge points within or adjacent to the work areas that are impacted by stormwater runoff from the site.
- C. Acceptance of TESC plans does not constitute an approval of permanent Work or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
- D. Contractor shall read and conform to all requirements set forth in Washington Department of Ecology's (Ecology) Phase I Municipal Stormwater Permit (MS4) for projects less than one acre.

1.02 REFERENCES

- A. The rules, requirements, and regulations that apply to this Work include, but are not necessarily limited to the following:
 - 1. Washington Department of Ecology, "Stormwater Management Manual for Western Washington," current version.
 - 2. Washington Department of Ecology Phase I Municipal Stormwater Permit (MS4), current version.
 - 3. Washington State Department of Transportation, current version, Standard Specification M41-10, Division 8-01 Erosion Control and Water Pollution Control.
 - 4. Pierce County Stormwater and Site Development Manual, current version (if applicable).

1.03 SUBMITTALS

- A. Prior to the start of any construction activities, a Construction Stormwater Pollution Prevention Plan (SWPPP), as required by the MS4 or acceptance of Port provided SWPPP. The Port's short form can be found in the Appendix.
 - 1. Contractor shall comply with a Contractor provided project SWPPP.
 - 2. Contractor shall be responsible for updating the project SWPPP during construction to reflect the required changes to BMPs and personnel, as needed, to comply with the MS4 at no additional cost to the Port.
- B. Safety Data Sheet (SDS) for any dust palliative product.

- C. A copy of all Contractor site inspection logs at a time interval (e.g., weekly, monthly) specified by the Engineer.
- D. Water Management Plan/Temporary Dewatering Plan.

1.04 AUTHORITY OF ENGINEER

- A. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations, as determined by analysis of project conditions; and to direct the Contractor to provide immediate permanent or temporary pollution control measures to minimize impacts to adjacent streams or other watercourses, lakes, ponds, and other areas of water impoundment.
- B. In the event that areas adjacent to the work area are suffering degradation due to erosion, sediment deposit, water flows, or other causes, the Engineer may stop construction activities until the Contractor rectifies the situation.

PART 2 – PRODUCTS

2.01 DUST CONTROL

- A. Dust palliative for dust control proposed by the Contractor and approved by the Engineer.

PART 3 – EXECUTION

3.01 GENERAL

- A. The Port is subject to a Phase I Municipal Stormwater Permit (MS4). The Contractor shall be responsible for compliance with the Department of Ecology Western Washington Stormwater Management Manual, Volume II, Construction Stormwater Pollution Prevention for the duration of the project.
- B. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply as determined by the Engineer.
- C. No project discharge of water shall be allowed that exceeds the regulated pollutant levels in Ecology's NPDES permit associated with the Project.
- D. Contractor shall be solely responsible for all BMP modifications and upgrades to comply with the MS4 and the requirements of this Section, at no additional cost to the Port.
- E. Contractor shall be solely responsible for any damages and fines incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.
- F. The Contractor shall be solely responsible for schedule impacts incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.

3.02 TEMPORARY EROSION AND SEDIMENT CONTROL DEVELOPMENT

- A. Contractor shall prepare and submit a site-specific SWPPP prior to initiating ground disturbing activities.
 - 1. The SWPPP describes construction activities and sequencing, and the proposed Temporary and Permanent Erosion and Sediment Control measures. If there are any changes to BMPs or personnel on the site, Contractor must update the SWPPP and be prepared to submit the SWPPP to the Port and Ecology upon request.

2. The SWPPP shall consist of planning, installing, inspecting, maintaining, and removing TESC BMPs per Volume II of the Stormwater Management Manual for Western Washington (current version) or equivalent. The BMPs shown in the Drawings are the minimum required to prevent pollution of air and water, to control peak volumetric flow rates and velocity of stormwater, and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.
 3. A SWPPP template is available to the Contractor for this purpose. The template was prepared by the Port to meet part of the National Pollution Discharge Elimination System (NPDES) stormwater permit requirements for the project. Contractor may use the applicable Port template to prepare the project SWPPP or prepare their own SWPPP. If the Contractor elects to prepare their own SWPPP, it must meet or exceed the control measures required by Ecology (reference Ecology's Stormwater Management Manual for Western Washington, current version).
 4. If Contractor chooses to write a SWPPP separate from the Port-provided SWPPP, it must comply with all of the requirements set forth by the CSGP.
- B. Contractor shall develop project-specific TESC BMPs and incorporate them into the SWPPP. Contractor shall address the following issues as part of developing and implementing the BMPs:
1. TESC BMPs must meet the requirements in Ecology's Volume II of the Stormwater Management Manual for Western Washington (current version) or equivalent.
 2. TESC notes and details shown in the Drawings and the information in this Section form a basis of the minimum requirements for a TESC Plan. Contractor shall develop a TESC Plan specific to the construction schedule and proposed means and methods prior to commencing construction activities for the duration of the Project.
- C. Contractor shall inspect the existing system and report to the Engineer the levels of existing material prior to installation of TESC BMPs.

3.03 TEMPORARY EROSION AND SEDIMENT CONTROL IMPLEMENTATION

- A. Contractor is responsible for implementing and updating the SWPPP including TESC BMPs.
1. Contractor shall inspect the TESC measures daily and maintain these measures to ensure continued proper functioning for the duration of the Project.
 2. Contractor will be responsible for documenting TESC site inspections on a weekly basis in areas of active construction and on a monthly basis in areas that have undergone stabilization. Contractor shall keep records of the inspections on site.
 3. During the construction period the Contractor shall, at no additional cost to the Port, upgrade and/or maintain TESC measures as needed, based on Contractor means and methods, work sequencing, and changing site conditions (e.g., changes to impervious surface coverage, proximity of work to storm conveyance systems, storm events, etc.). Contractor shall modify these measures for changing site conditions and update the SWPPP to document all modifications made.
- B. Contractor shall clean all stormwater components affected by construction debris prior to Work completion, per TESC BMPs for catch basin maintenance. The cleaning process shall not flush sediment-laden water into a downstream system.

- C. Contractor shall ensure that water, or a dust palliative and a dispensing subcontractor, if needed, is available for project use. It is the responsibility of the Contractor to develop and adhere to appropriate safety measures pertaining to the palliative use. This also includes ensuring the dispensing subcontractor develops and adheres to the appropriate safety measures, if a dispensing subcontractor is used. Water used for dust suppression shall not be applied at such a rate or in a location that it will generate runoff from the site.
- D. Areas of exposed soils, including embankments, which will not be disturbed for two days during the wet season (October 1 through April 30) or seven days during the dry season (May 1 through September 30), shall immediately be stabilized by the Contractor with an Ecology-approved TESC measure (e.g., seeding, mulching, plastic covering, etc.).
- E. TESC measures in an inactive area shall be inspected and maintained by the Contractor until the area is permanently stabilized.
- F. In the event that additional temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the Work as scheduled or as ordered by the Engineer, such work shall be performed by the Contractor at its own expense.
- G. Contractor shall remove all TESC facilities, install permanent site surfacing improvements and permanent BMPs with minimal disturbance, and shall clean stormwater facilities prior to Work completion.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide product data under the applicable specification section.

1.02 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 - PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 - EXECUTION

3.01 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.02 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Prevent contact with material that may cause corrosion, discoloration, or staining.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Examination, preparation, and general installation procedures
 - 2. Cutting and patching

1.02 SUBMITTALS

- A. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project;
 - 2. Integrity of weather exposed or moisture resistant element;
 - 3. Efficiency, maintenance, or safety of any operational element;
 - 4. Visual qualities of sight exposed elements; and
 - 5. Work of the Port or separate Contractor.
- B. Project As-Built Documents: Accurately record actual locations of capped and active utilities.

PART 2 - PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work;
 - 2. Fit products together to integrate with other work;
 - 3. Provide openings for penetration of mechanical, electrical, and other services;
 - 4. Match work that has been cut to adjacent work;
 - 5. Repair areas adjacent to cuts to required condition;
 - 6. Repair new work damaged by subsequent work;
 - 7. Remove samples of installed work for testing when requested; and
 - 8. Remove and replace defective and non-conforming work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.06 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes information for progress and final cleaning and restoration of damaged work prior to final inspection.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.01 PROGRESS CLEAN-UP

- A. The Contractor shall clean the project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with all requirements 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 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 for the type of material 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 from 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 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 Section 01 74 16.

- 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 until 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 assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.02 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
 - c. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
 - e. Remove debris and surface dust from limited access spaces, including roofs, attics, and similar spaces.
 - f. Sweep concrete floors broom clean in unoccupied spaces.
 - g. Remove labels that are not permanent.
 - h. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - i. Leave Project clean and ready for occupancy.

3.03 REPAIR OF WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surface, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.

- a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
2. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes construction waste management requirements.

1.02 DESCRIPTION OF WORK

- A. The work includes demolition and removal within the project areas as shown on the drawings. The work also includes waste generated by construction activities, materials, packaging, scraps, and garbage.

1.03 DEFINITIONS

- A. Co-mingled or Off-site Separation: Collecting all material types into a single bin or mixed collection system and separating the waste materials into recyclable material types at an off-site facility.
- B. Construction, Demolition and Land-Clearing (CDL) Waste: Includes all nonhazardous solid wastes resulting from construction, remodeling, alterations, repair, demolition, and land clearing. Includes material that is recycled, reused, salvaged or disposed as garbage.
- C. Hazardous/Dangerous Waste: As defined by Chapter 70.105.010 Revised Code of Washington and 40 Code of Federal Register 261 and by Washington Administrative Code 173-303.
- D. Proper Disposal: As defined by the jurisdiction receiving the waste.
- E. Recyclable Materials: Products and materials that can be recovered and remanufactured into new products.
- F. Recycling: The process of sorting, cleaning, treating and reconstituting materials for the purpose of using the material in the manufacture of a new product. Can be conducted on-site (as in the grinding of concrete).
- G. Recycling Facility: An operation that is permitted to accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product.
- H. Salvage for Reuse: Existing usable product or material that can be saved and reused in some manner on the project site or other projects off-site.
- I. Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.
- J. Source-Separated Materials: Materials that are sorted at the site into separate containers for the purpose of reuse or recycling.
- K. Sources Separation: Sorting the recovered materials into specific material types with no, or a minimum amount of, contamination on site.
- L. Time-Based Separation: Collecting waste during each phase of construction or deconstruction that results in primarily one major type of recovered material. The material is removed before it becomes mixed with the material from the next phase of construction.
- M. Garbage: Product or material typically considered to be trash or debris that is unable to be salvaged for resale, salvaged and reused, returned, or recycled.
- N. Olfactory Indications (methods): Of or relating to the sense of smell. Soils contaminated with petroleum and other volatile constituents typically exhibit characteristic odors that can be detected (and sometimes identified) by smell.

- O. PID: Photo Ionization Detector. A field instrument that is used to detect the presence of and give a relative indication of the concentration of vapors emitted from volatile constituents (contamination) in environmental media (soil and water).
- P. Soil (waste) Profile: A characterization of the chemical and physical properties of a waste material including the types of contaminants and their concentrations as measured by approved laboratory analytical methods. A profile is required by the receiving permitted disposal or recycling facility.
- Q. Type D Material: Material including soil, determined by the Engineer not to require special handling with regard to this Contract. Classification of material as Type D material by the Port is not a certification nor does it release the Contractor of liability or obligation to meet any disposal or storage facility acceptance or testing requirements.
- R. Unanticipated Contamination: Contamination unexpectedly found in an excavation or in other locations where there is no prior knowledge, information, or history to indicate possible spills or releases of contamination.
- S. Visual Indications (methods): A preliminary evaluation of the potential presence of contamination based on visual observation. For example, fuel contaminated soils are frequently discolored or stained relative to non-petroleum impacted native soils or clean fill.

1.04 SUBMITTALS

- A. Waste Management Plan
- B. Waste Management Final Report

1.05 PERFORMANCE GOALS

- A. General: Divert CDL waste to the maximum extent practicable from the landfill by one or a combination of the following activities:
 - 1. Salvage
 - 2. Reuse
 - 3. Source separated CDL recycling
 - 4. Co-mingled CDL recycling
- B. CDL waste materials that can be salvaged, resold, reused or recycled, include, but are not limited to the following:
 - 1. Clean dimensional wood, pallet wood, plywood, OSB, and particleboard
 - 2. Concrete and concrete masonry units
 - 3. Ferrous and non-ferrous metals
 - 4. Field office waste paper, aluminum cans, glass, plastic, and cardboard
- C. Hazardous/Dangerous Wastes, contaminated soils and other hazardous materials such as paints, solvents, adhesives, batteries, and fluorescent light bulbs and ballasts shall be disposed of at applicable permitted facilities.

1.06 WASTE MANAGEMENT PLAN

- A. Submit a Waste Management Plan within 10 days after the notice to proceed and not less than 5 days before any demolition activities in accordance with these specifications. Provide a Waste Management Plan in a format as approved by the Engineer.

- B. The Waste Management Plan shall include the following:
 - 1. Name of designated Waste Management Coordinator.
 - 2. A list of waste materials, including estimated types and quantities, of the waste that will be generated. Indicate salvaged for resale, salvaged for reuse, recycled, or disposed for each item.
 - 3. Identify waste handling methods to be used, including one or more of the following:
 - a. Method 1 - Contractor or subcontractor(s) hauls recyclable materials to an approved recycling facility.
 - b. Method 2 - Contracting with diversion/recycling hauler to haul recyclable material to an approved recycling or material recovery facility.
 - c. Method 3 - Recyclable material reuse on-site.
 - d. Method 4 - Recyclable material salvage for resale.
 - e. Method 5 - Contractor or subcontractor hauls waste to an approved disposal facility.
 - 4. Identification of each recycling, disposal, or material recovery facility to be utilized, including name, address and types of materials being recycled at each facility.
 - 5. Description of the method to be employed in collecting, and handling, waste materials.
 - 6. Description of methods to communicate Waste Management Plan to personnel and subcontractors.
 - 7. Actions that will be taken to reduce solid waste generation.
- C. Revise and resubmit Waste Management plan as required by the Engineer. Approval of the Contractor's Plan does not relieve the Contractor of responsibility for compliance with all applicable laws and regulations. Distribute copies of the Waste Management Plan to each subcontractor.

1.07 WASTE MANAGEMENT FINAL REPORT

- A. Provide a Waste Management Final Report, in a format approved by the Engineer. The Waste Management Final Report shall list the following for the project:
 - 1. A record of each waste material type and quantity recycled, reused, salvaged, or disposed from the Project. Include total quantity of waste material removed from the site and hauled to a landfill.
 - 2. Percentage of total waste material generated that was recycled, reused, or salvaged.
- B. Quantities shall be reported by weight (tons) unless otherwise approved by the Engineer.
- C. Submit copies of manifests, weight tickets, recycling/disposal receipts or invoices, which validate the calculations or a signed certification of completeness and accuracy of the final quantities reported.

1.08 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor shall maintain compliance with all applicable Federal, State, or Local laws that apply to Construction Waste Management and material salvage, reuse, recycling and disposal.

- B. Disposal Sites, Recyclers and Waste Materials Processors: All facilities utilized for management of any materials covered under this specification must maintain all necessary permits as required by federal, state and local jurisdictions.

1.09 HEALTH AND SAFETY

- A. The Contractor is required to implement all health and safety provisions as required by Specification 01 35 29 - Health, Safety and Emergency Response Procedures.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 WASTE DISPOSAL

- A. Source-Separated CDL Recycling: Provide individual containers for separate types of CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.
- B. Co-Mingled CDL Recycling: Provide containers for co-mingled CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.
- C. Landfill: Provide containers for CDL waste that is to be disposed of in a landfill clearly labeled as such.
- D. Removal of CDL Waste from Project Site: Transport CDL waste off Port's property and provide legal disposal.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures
 - 2. Final completion procedures
 - 3. Warranties
 - 4. As-Built Drawings

1.02 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

1.03 PROJECT SUBMITTALS

- A. Submittal of Project Warranties
- B. Record Drawings
 - 1. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous recordkeeping requirements and submittals in connection with various construction activities.
- C. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.04 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request:
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Port unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in individual Sections, including specific warranties, operation and maintenance manuals, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 3. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by the Contract Document or Engineer. Label with manufacturer's name and model number where applicable.
 - 4. Submit test/adjust/balance records.
 - 5. Submit changeover information related to Port's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request:

1. Make final changeover of permanent locks and deliver keys to Port
 2. Complete startup and testing of systems and equipment
 3. Perform preventive maintenance on equipment used prior to Substantial Completion
 4. Instruct Port's personnel in operation, adjustment, and maintenance of products, equipment, and systems
 5. Advise Port of changeover in heat and other utilities
 6. Terminate and remove temporary facilities from Project site
 7. Complete final cleaning requirements
- D. Submit a written request for inspection to determine Substantial Completion a minimum of DD days prior to the date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Notice of Substantial Completion after inspection or will notify Contractor of items, either on the Contractor's list or additional items identified by the Engineer, that must be completed or corrected before notice will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.05 PUNCH LIST (LIST OF INCOMPLETE ITEMS)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of Construction.
1. Organize list of spaces in sequential order.
 2. Organize items applying to each space by major elements.

1.06 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete and submit the following:
1. Submittal of all remaining items, including as-built documents, final completion construction photographic documentation, damage or settlement surveys, surveys, and similar final record information and all other submittals defined in the Contract Documents.
 2. List of Incomplete Items: Submit copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (Punch List). Copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of DD days prior to date the work will be complete and ready for final inspection and tests. On receipt of request, the Engineer will either proceed with inspection or notify contractor of unfulfilled requirements.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
- C. Execution of all Change Orders.

1.07 FINAL ACCEPTANCE PROCEDURES

A. Submittals Prior to Final Acceptance:

1. Receipt and approval of application for final payment; due within seven (7) days of receipt of Final Completion by the Engineer;
2. Contractor's signed waiver and release of claims on the Engineer provided form;
3. Contractor's submittal of list of all suppliers and subcontractors and the total amounts paid to each on the Engineer provided form; and
4. Contractor's submittal of a list of all subcontractors and suppliers requiring Affidavits of Wages paid on the Contract and certify that each of companies will submit an approved Affidavit of Wages paid to the Port within 30 days.

B. The Engineer will issue the Final Acceptance Memo upon receipt of the required submittals.

PART 2 - PRODUCTS

2.01 CONTRACTOR'S WARRANTY

- A. The Contractor warrants the labor, materials and equipment delivered under the contract to be free from defects in design, material, or workmanship, and against damage caused prior to final inspection. Unless otherwise specified, this warranty extends for a period of one (1) year from the date of Substantial Completion.
1. Time of Submittal: Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit the Port's rights under warranty.
 2. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Port or Port tenants during construction.
 3. Submit Warranties to the Engineer as a submittal, as described in 01 33 00 – Submittal Procedures.
 4. Provide additional copies of each warranty in Operation and Maintenance Manuals as described in 01 78 23 – Operation and Maintenance Manuals.
- B. In the event of equipment failure, during such time or in such a location that immediate repairs are mandatory, the Contractor shall respond promptly (within 48 hours), irrespective of day of the week. If the Contractor is not available, the Port will affect repairs. The Contractor shall then reimburse the Port for parts and labor necessary to correct deficiencies as defined within the warranty clause and time.

2.02 AS-BUILT DRAWINGS

- A. Project As-Built Drawings: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
- B. Project As-Built Drawings shall be compiled by the Contractor and submitted to the Engineer for translation to the Record Drawings on a monthly basis.
1. The Project As-Built Drawings will be submitted on paper full-sized (ANSI D) copy.

2. Drawings shall be kept current and shall be done at the time the material and equipment is installed. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:
 - a. Additions – Red
 - b. Deletions – Green
 - c. Comments – Blue
 - d. Dimensions – Graphite
3. Project As-Built Drawings must be complete and accepted by the Engineer before Final Completion is issued.
4. As-Built Drawings shall be in accordance with horizontal and vertical control as shown on the drawings.

PART 3 – EXECUTION

3.01 MAINTENANCE OF AS-BUILT DRAWINGS

- A. The Contractor shall maintain at the Project site, in good order for ready reference by the Engineer, one complete copy of the Contract Documents, including Addenda, Change Orders, other documents issued by the Port, a current Progress Schedule, and approved Submittals. The Contractor shall also generate and keep on site all documents and reports required by applicable permits.
- B. The Contractor's As-Built Drawings shall be updated to record all changes made during construction. The location of all existing or new underground piping, valves and utilities, and obstructions located during the Work shall be appropriately marked until the Contractor incorporates the actual field dimensions and coordinates into the as-built drawings. The as-built drawings shall be updated at least weekly and before elements of the Work are covered or hidden from view. After the completion of the Work, the as-built drawings shall be provided to the Port.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Work in this section includes:
 - 1. Demolition of existing courtyard storefront

1.02 RELATED WORK

- A. Asbestos Abatement, Section 02 82 00

1.03 SUBMITTALS

- A. Demolition Plan: Show demolition and removal sequences of operations, locations of barriers and enclosures, and temporary work and construction facilities.
 - 1. Indicate primary offloading areas and location of waste containers.
 - 2. Show location and construction of temporary overhead protection at egress points.
 - 3. Illustrate location and construction of any debris containment structures.
- B. Water Intrusion Plan: Describe measures taken by the contractor to address the prevention, management, and response to water intrusion events and potential mold growth.
 - 1. Provide a 24-hour emergency contact person.
 - 2. Indicate the methods and materials used for temporary weather protection.
 - 3. Outline the steps taken to identify and eliminate the source of moisture/water.
 - 4. Describe the steps for assessing and repairing water damage or impacted materials.
 - 5. Describe the actions taken after a water intrusion event to monitor impacted materials and prevent mold growth.

1.04 COORDINATION

- A. Existing Conditions: Contractor to familiarize himself/herself with the requirements of the work and to visit the site to determine the full extent of demolition required. Contractor shall employ all reasonable means of site verification and review of reference documents of the existing facility to make this determination.
- B. Coordinate all shutdowns with the Engineer at least one week in advance. Conduct demolition work in manner that will minimize need for disruption of Engineer's normal operations. Provide minimum of 72 hours advance notice to Engineer of demolition activities, which will severely impact Engineer's normal operations.
- C. Ensure all safety and containment measures are in place before commencing work under this section, including overhead protection and debris containment.
- D. Coordinate work of this Section with demolition procedures scheduled under other Sections. Selectively demolish as work progresses to maintain building integrity from moisture and structural damage.
- E. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces, and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing building. Do not leave exposed structure overnight. Protect exposed substrate structure with temporary weather protection after each workday.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that demolition activities may safely and appropriately begin.
- B. Verify acquisition of required permits and permission from local governing authorities.

3.02 DEMOLITION – GENERAL

- A. Conduct operations so as to prevent damage to finished surfaces and portions of building systems to remain in place. Remove abandoned items and extraneous material such as but not limited to; abandoned pipe, conduit, clips, fasteners, and fabrications.

3.03 PROTECTION

- A. Install protective coverings and barriers to prevent damage to existing wall assemblies and components to remain.
- B. Respond to any reported water intrusion events as quickly as possible, but no later than 24 hours. Remove and replace any wet or damaged materials. Ensure all areas are completely dry prior to covering.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. This section covers the removal and disposal, or other impact, of asbestos-containing materials (ACMs) as necessary to accomplish the Work as defined by these Specifications.
- B. Contractor shall provide all labor, materials, equipment, services, permits and insurance required to complete asbestos abatement procedures as indicated in this Specification.
- C. The Contractor shall refer to the Limited Hazardous Building Material Assessment attached to these Specifications, which list suspect materials in the areas of the Work. The Contractor shall ensure that a copy of this report is made available to and retained on the project site by all subcontractors.

1.02 RELATED WORK

- A. Work performed under this specification section shall be governed by all related specification sections, including, but not limited to, the following:
 - 1. Division 02 - Existing Conditions:

1.03 DEFINITIONS

- A. Authorized Visitor: The Engineer or designated representative, or a representative of any regulatory or other agency having jurisdiction over the project, and having required training, medical, fit test, etc.
- B. Environmental Consultant: Environmental consultant specializing in asbestos abatement
- C. Independent Testing Laboratory: A laboratory financially independent from and hired by the Engineer or Contractor which is either AIHA-accredited for asbestos with demonstrated proficiency via the AIHA PAT program or has analysts proficient in the AIHA AAR program for air sample analysis.
- D. Engineer: Representatives designated by the Engineer, or designated employees of the Engineer.
- E. Work Area: A regulated area where asbestos abatement activities are performed; isolated from non-work areas by negative pressure, containment barriers, decontamination enclosure systems and warning signs or demarcation tape with warning signs.

1.04 DOCUMENTS INCORPORATED BY REFERENCE

- A. The current issue of each document shall govern. Where conflict among requirements or with these Specifications exists, the most stringent requirements shall apply.
- B. U.S. Environmental Protection Agency National Emissions Standards for Hazardous Air Pollutants (NESHAPS). (Code of Federal Regulations Title 40, Part 61, Subparts A & B.)
- C. U.S. Environmental Protection Agency Office of Toxic Substances Guidance Document, Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, EPA Report Number 560/5-85-024 ("Purple Book").
- D. U.S. Department of Labor Occupational Safety and Health Administration (OSHA):
 - 1. Title 29 Code of Federal Regulations Section 1910.1001--General Industry Standard For Asbestos.
 - 2. Title 29 Code of Federal Regulations Section 1910.134--General Industry Standard For Respiratory Protection.

3. Title 29 Code of Federal Regulations Section 1910 et al.--Occupational Exposure to Asbestos; Final Rule.
4. Title 29 Code of Federal Regulations 1926.1101--Construction Standard for Asbestos.
5. Title 29 Code of Federal Regulations Section 1910.2--Access to Employee Exposure and Medical.
6. Title 29 Code of Federal Regulations Section 1910.1200--Hazard Communication.
- E. Environmental Protection Agency 40 CFR Part 763, AHERA, Asbestos-Containing Materials in Schools; Final Rule and Notice.
- F. National Institute for Occupational Safety and Health (NIOSH), 30 CFR, Part II, Respirators.
- G. American National Standards Institute (ANSI) NY; ANSI Standard Z 88.2-1980, American National Standards Practice for Respiratory Protection, latest edition.
- H. CERCLA, Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601 et seq.).
- I. RCRA, Resource Conservation and Recovery Act.
- J. Washington State General Occupational Health Standards, WISHA Chapter 296-62 Washington Administrative Code (WAC); Chapter 296-65 WAC Asbestos Removal & Encapsulation; Chapter 296-155 WAC Safety Standards for Construction Work.
- K. Puget Sound Clean Air Agency Regulation III, Article 4 Asbestos Control Standard.
- L. Washington Industrial Safety and Health Act (WISHA).
- M. Uniform Building Code (U.B.C.), latest edition, and regulations as applicable.
- N. Perform all electrical work in accordance with the National Electrical Code.
- O. All local ordinances, regulations, or rules pertaining to asbestos, including its storage, transportation, and disposal.

1.05 SUBMITTALS AND NOTICES

- A. Contractors shall provide complete "Pre-Job Submittals" as indicated below for review by the Environmental Consultant. Following receipt of review comments from the Engineer and Environmental Consultant, submit additional complete sets of the revised submittals to the Engineer as specified. No asbestos-related work will be permitted prior to submittals being processed by the Environmental Consultant. Allow fifteen (15) days for review prior to the commencement of abatement.
- B. Additional requirements for submittals are also described in other sections of these specifications. The requirements in this section pertain to asbestos-containing materials removal.
- C. Contractor shall submit to the Engineer the following information prior to beginning work on the project:
 1. Work Plan: Include a detailed plan of the procedures proposed for use in complying with the requirements for each site, including the following:
 - a. A description of all special equipment, techniques, and methods to be used on the Project, including schematic drawings of work area layout(s) showing entries/exits, HEPA exhausts, decon units, and waste load-outs.

- b. A specific clearance monitoring schedule indicating proposed start dates/times and completion dates/times for individual regulated areas as configured in the proposed Work Plan.
 - c. Specific information relating to handling, transport and disposal of asbestos- containing waste from each waste-generating site. Identify the designated proposed disposal site at which any waste material generated during the project will be disposed and furnish evidence of all necessary government approvals to dispose of the waste.
 2. Laboratory Qualification Information: Submit information pertaining to the proposed Air Monitoring Program for this project. Contractor's air monitoring shall include employee exposure monitoring. This information shall include the name(s) of personnel collecting air samples, types of equipment, sampling schedule, sampling procedures, calibration record keeping, name and address of proposed Independent Testing Laboratory, and evidence of analyst's NIOSH 582 course completion and AIHA PAT program participation.
 3. Worker Certification: Submit written proof that all employees performing asbestos- related work will have completed all necessary asbestos-related training in compliance with WAC Chapters 296-62 and 296-65. Written proof may be in the form of a notarized letter stating such intent and signed by an owner or principal of the appropriate firm(s).
 4. Written Respirator Program and Fit Testing: Submit written proof that all employees requiring respiratory protection participate in a written respiratory protection program established and maintained in accordance with current WAC regulations. At the request of the Engineer, make available the Contractor's written respiratory protection program for review (copy not required as part of initial submittal package).
 5. Notifications and Policies: Submit copy of all required notifications and permits obtained by the contractor (Washington State Department of Labor and Industries, and PSCAA) and copies of all types of specified bonds and insurance. Submit upon receipt any approved amendments to notifications or re-notifications for multi-phase activities. See Paragraph 1.11 - Permits and Notifications for additional requirements.
 6. Certified Asbestos Supervisor (CAS): Submit the name, Asbestos Supervisor Certification and resume of experience of the assigned on-site CAS. At a minimum, the foreman shall have successfully completed a supervisor-training course in compliance with WAC Chapter 296-65-007. References and work on similar projects will also be reviewed. The Engineer and/or the General Contractor and Environmental Consultant reserve the right to remove the CAS from the work at any time during the project. The Contractor shall then submit another on-site CAS for approval as described above.
- D. Daily Job Submittals
1. Personal Air Monitoring: Submit copies of all personal air monitoring data sheets, chain-of-custody and analytical results to the General Contractor and Environmental Consultant on a daily basis within 24 hours following sample collection.
 2. Daily Logs: Submit copies of daily logs to the General Contractor and Environmental Consultant daily prior to the end of the next work shift. Daily logs shall indicate the date, time, site location, identity, company or agency represented, and reason for entry of all persons entering the work area, and the type, amount and location(s) of all ACMs removed.
 3. Entry/Exit logs: Submit copies of regulated area entry/exit logs to the General Contractor and Environmental Consultant on a daily basis prior to the end of the next work shift

E. Periodic Submittals

1. Asbestos Training: Upon verbal request, immediately make available to the Environmental Consultant proof of Asbestos Worker Certification or Asbestos Supervisor Certification. Provide copies of worker training certification to the Engineer upon request.
 2. Work Plan modification/clarification: In the event that on-site activities will require departure from any and all aspects of the information outlined in the pre-approved Work Plan, submit written clarification/modification of proposed changes to the Engineer and Environmental Consultant.
- F. Post-Job Submittals shall be delivered to the General Contractor within 15-days of completion of asbestos-related work as specified by these Contract Documents and shall include the following:
1. Certification: Provide written certification from the Abatement Contractor's Project Manager or Supervisor that Contractor has fully inspected the work area and completed work in strict accordance with the Specifications.
 2. Air Monitoring: Submit documentation of all employee personal air monitoring results relative to OSHA and WISHA respiratory protection level compliance. Include copies of all air monitoring data sheets, chain-of-custody documentation and analysis reports for sampling conducted at the site.
 3. Project Record Documents: Provide project records including documentation of all contract changes, and copies of worksite entry logs, work area entry/exit logs, safety logs, safety meeting sign-in sheets, and supervisor's daily field reports.
 4. Disposal Manifests: Submit copies of all asbestos waste transportation and disposal manifests including signed receipts from the landfill, and chain-of- custody.
 5. Final payment will be issued by the Engineer only with written approval, by the Environmental Consultant, of post-job submittals.

1.06 PERSONNEL PROTECTION

A. Training

1. Prior to commencement of work, Contractor shall ensure all workers have been trained as specified in WAC Chapter 296-65.
2. The Contractor shall provide and post decontamination, respirator, and work procedures for abatement crew.

B. Personnel Protective Equipment for Asbestos Removal

1. Provide protective clothing and equipment per WAC 296-62.

1.07 AIR MONITORING BY CONTRACTOR

- A. Industrial Hygienist: An Independent Testing Laboratory shall be retained by the Contractor for PCM sample analysis. All analysis shall be performed by an Industrial Hygienist. The Hygienist must be experienced and trained in asbestos sampling and analysis. At a minimum, documentation of prior asbestos sampling and analysis experience, plus satisfactory completion of the NIOSH 582 course or equivalent will be required. Air sample collection may be performed by an Industrial Hygienist or the Contractor's foreman at the Contractor's option. The Contractor shall perform sampling and analysis of air samples for asbestos in compliance with WAC Chapter 296-62- 07735, Appendix A-WISHA reference method, or equivalent.

- B. Sample Documentation: Documentation shall be kept for each filter sample procured as to worker sampled, social security number, activity, work area location, date and time taken, volume of air drawn through filter, pump identification number and calibration. Report all data on copies of Asbestos Air Sampling Data Form bound in these Specifications or similar approved form within 48 hours. Fill in all information on every form. Submit chain-of-custody records along with all samples
- C. Analysis Procedures: The samples shall be collected on 25 mm filters and analyzed within 12 hours using the membrane filter method at 400-500x magnification with phase contrast illumination--NIOSH Analytical Method No. 7400--for laboratory and field analysis. The analyst shall sign and submit permanent records of all samples analyzed directly to the Environmental Consultant. The Independent Testing Laboratory shall seal the unused portion of all filters in airtight containers so that individual samples can be re-analyzed at a later date if necessary. The containers shall be clearly labeled with Project Name and Sample Number and shall become property of the Engineer at work completion at the Engineer's request.
- D. Controls: The Contractor's testing laboratory shall submit sample analysis results, chain-of-custody and equipment calibration records to the Environmental Consultant within 24 hours of collection.
- E. Contractor's Sampling During Abatement
 - 1. Sample Collection: Air monitoring shall be performed to determine worker exposure during the period of asbestos abatement in each work area. Begin sampling when asbestos removal commences. Samples are to be taken where Class I or II work is being conducted during each 8-hour work shift.
 - 2. Most Contaminated Worker: The Contractor shall determine which worker(s) in each work area is probably experiencing the most severe exposure. This is the "Most Contaminated Worker(s)". 8-hour TWA and 15-minute excursion samples shall be collected on this worker(s). This worker shall wear a personal sampling pump and the sample shall be drawn from the breathing zone of this worker.
 - 3. The number of air samples collected shall be in accordance with the Contractor's approved work plan, however, collect a minimum of one sample per work area daily.

1.08 AIR MONITORING BY OWNER

- A. Industrial Hygienist: The Engineer will retain an experienced Industrial Hygienist/ Environmental Consultant to collect and analyze asbestos air samples prior to abatement, inside the work area, outside the work area, at HEPA exhaust and after visual inspection. Documentation of sample results will be forwarded to the Contractor as appropriate.
- B. Sampling and analysis of asbestos samples shall be performed in compliance with WAC Chapter 296-62-07735, Appendix A--WISHA reference method, or equivalent.
- C. The Engineer reserves the right to monitor Contractor's performance via air samples on abatement workers in addition to the Contractor's air monitoring.

1.09 OWNER OCCUPANCY

- A. The area of abatement shall be occupied only by properly trained workers and authorized inspectors during abatement activities. Coordinate phasing of abatement areas to comply with occupancy requirements as defined in Section 011110, Summary of Work.

1.10 WORKING HOURS

- A. Submit proposed work schedule to Engineer for approval in conjunction with submittals required by this Section. The Engineer reserves the right to restrict and curtail any operations which are considered, at the Engineer's sole determination, to generate such noise or activities as to interfere with facility operations. Submit any revisions to the approved schedule in writing a minimum of 48 hours prior to the desired schedule change.

1.11 PERMITS AND NOTIFICATIONS

- A. The Contractor is responsible for obtaining all permits and notifications as required for the completion of the work by the Washington State Department of Labor and Industries, the U.S. E.P.A., the Puget Sound Clean Air Agency and any other permitting agency involved with the completion of the work included herein.

1.12 PERSONNEL TRAINING

- A. All personnel accomplishing removal of asbestos-containing materials shall have received the minimum training as required by the Washington State Department of Labor and Industries for the work to be performed. At a minimum, the supervisor shall be the bearer of a current "Certified Asbestos Supervisor Certificate" issued by the Washington State Dept. of Labor and Industries.

1.13 LIABILITY

- A. The Contractor is an independent contractor and not an employee of the Engineer, Architect or Environmental Consultant. The Engineer, Architect and the Environmental Consultant shall have no liability to the Contractor or any third persons for Contractor's failure to faithfully perform and follow the provisions of these Specifications and the requirements of the governing agencies. Notwithstanding the failure of the Engineer, Architect or the Environmental Consultant to discover a violation by the Contractor of any of the provisions of these Specifications, or to require the Contractor to fully perform and follow any of them, such failure shall not constitute a waiver of any of the requirements of these Specifications which shall remain fully binding upon the Contractor.

1.14 SUBCONTRACTORS

- A. Subcontractors employed by the Contractor shall be bound to all the work and safety standards specified. Subcontractor's personnel shall meet requirements as specified, and shall be supervised by the Contractor during performance of this work.

1.15 QUALITY ASSURANCE

A. On-Site Observation

1. Pre-Removal: Environmental Consultant shall perform observations regarding: demarcation of regulated area, installation of critical barriers, integrity of negative pressure enclosures, waste load-out facilities, and other conditions affecting abatement work. Contractor shall request pre-removal observations a minimum of two hours prior to desired removal commencing. No abatement work shall be performed prior to pre-removal observations by the Environmental Consultant.
2. Observation: Environmental Consultant shall perform observations regarding: integrity of isolation barriers, decontamination facilities, worker protection, Contractor's air monitoring program, performance of abatement operations, and conformance to the Specification, EPA, OSHA, WISHA and PSCAA regulations.

3. Post Removal: Environmental Consultant shall perform visual inspections after the removal of asbestos-containing materials is complete. Upon completion of asbestos-related activities, all work areas shall be free of all accumulations of dust, debris or three-dimensional residue. Schedule post-removal inspections a minimum of 24 hours in advance.
4. No visual inspections will be performed on wet flooring areas. Ensure adequate drying time when scheduling inspections.
5. Stop Work: Environmental Consultant shall notify the Contractor in writing to stop work if the Environmental Consultant determines that work practices are in violation of regulations, these Specifications or work is endangering workers or occupants of the building. The Contractor shall continue work when conditions and actions are corrected and when written authorization is received from the Environmental Consultant.

B. Air Monitoring

1. Notification: If, at any time during the work, analysis of an air sample taken by the Contractor, Engineer, or Environmental Consultant from a non-isolated regulated work area or a non-regulated area indicates a fiber concentration in excess of the applicable Control Limit, the Industrial Hygienist who analyzed the air sample shall immediately notify the Contractor's Foreman, the Environmental Consultant: DH Environmental, Inc., the Engineer and other workers, employees, occupants, etc. in affected area(s).
2. Control Limits:
 - a. Inside Non-Isolated Regulated Work Area: 0.01 f/cc
 - b. Non-Regulated Area: 0.01 f/cc
3. Procedures: Immediately upon being notified of fiber concentration in excess of the Control Limit, the Contractor shall perform the following steps in the order presented, at no additional cost to the Engineer:
 - a. Stop abatement work and identify source of high fiber counts.
 - b. Corrective Actions: Immediately correct containment breaches, pressure differential changes and potential cause of high fiber counts. The Environmental Consultant will determine the affected area considered to be contaminated. The Environmental Consultant will determine the actions to be taken by the Contractor at no additional cost to the Engineer.
 - c. Clean the affected area using wet methods and HEPA vacuuming.
 - d. Re-sample air until fiber counts are determined to be below the specified maximum levels.
 - e. Secure and repair containment barriers, repair or add equipment.
 - f. Modify work procedures, and make other changes to reduce fiber counts.
4. Complete every part of the "Fiber Count Above Control Limit Data Form" bound into these Specifications. Resume work and air monitoring.
5. Additional Costs: The Contractor shall be responsible for costs of any testing, cleanup, repair, down time loss, etc. that is a result of the Contractor's negligence, poor maintenance of isolated areas, failed post-abatement sampling and improper procedures.

- C. Performance: Work shall be performed in a skillful manner representing industry standards. Environmental Consultant shall require Contractor to remove from the work site employees and subcontractors the Environmental Consultant deems incompetent, careless or objectionable.

PART 2 - PRODUCTS

2.01 PROTECTIVE CLOTHING AND EQUIPMENT

- A. Protective Clothing: Provide approved clothing per WAC 296-62 for all workers and all official representatives of the Engineer, State or other governmental entity, and the Environmental Consultant who may require such clothing.
- B. Respirators: At a minimum, respiratory protection shall be approved by NIOSH/MSHA (National Institute for Occupational Safety and Health/Mine Safety and Health Administration), United States Department of Labor, and U.S. Department of Health, Education and Welfare, Centers for Disease Control, in accordance with WAC Chapter 296-62-071. Respiratory protection shall provide workers with a maximum calculated fiber level inside the mask of 0.01 f/cc.
 - 1. Selection: As part of the Contractor's Respiratory Protection Program, all workers shall be provided with a selection of brands and sizes of respirators to choose from. At a minimum, all workers shall be quantitatively or qualitatively fit-tested at the time of respirator selection per WAC Chapter 296-62-07715.
 - 2. Contractor shall supply replacement filter cartridges as required. Cartridges which have become wet or clogged shall be replaced immediately.
 - 3. Contractor shall provide personal protective equipment and supplies to the Environmental Consultant and authorized visitors for use on the site.

2.02 MATERIALS

- A. Encapsulants (Sealants): Encapsulants shall be rated as "Acceptable" using the test method described in the EPA document published as National Technical Information Service report PB 88-113 329/AS [available from NITS, 5825 Port Royal Road, Springfield, VA 22161.] (The report is summarized in EPA publication EPA/600/S- 87/091 [available from Center for Environmental Research Information, EPA 26 Martin Luther King, and Cincinnati, OH 45268].)
- B. Plastic Sheeting: Plastic sheeting shall be flame-retardant polyethylene material, sized in lengths and widths to minimize the frequency of joints. Exterior applications require reinforced plastic sheeting. Plastic sheeting shall be minimum thickness of 6-mil for specific uses itemized by applicable codes and regulations. For other applications plastic sheeting shall be of adequate thickness to achieve the intended level of protection or functionality.

PART 3 - EXECUTION

3.01 WORK AREA PREPARATION

- A. Worker Decontamination Facilities
 - 1. Modified Worker Decontamination Enclosure System
 - a. At entrances to non-isolated work areas the Contractor shall construct a personnel decontamination enclosure system or area consisting of plastic sheeting barriers with a HEPA vacuum and water source and satisfying the requirements of WAC 296-62-07712. The system shall include a decontamination area where workers can remove contaminated protective clothing, decontaminate themselves and change into street clothing.

- b. Contractor shall not begin asbestos abatement work unless this system is functional, in good repair, and has been found acceptable for specification compliance by the Environmental Consultant.
- B. Access to Work Area by Others
 - 1. Except for emergency personnel, the Contractor shall limit access to the work area to authorized visitors.
 - 2. The Contractor shall provide protective clothing, respirators and equipment for all authorized visitors, as specified.
 - 3. All authorized visitors shall be subject to the personnel protection provisions specified above, and shall sign in and out on the Worksite Entry Logbook.
- C. Personnel Protection during Work in Non-Isolated Work Areas
 - 1. Work clothes per 2.01-A, and respiratory protection per 2.01-B.
 - 2. Clothing: Workers shall wear two layers of coveralls after removal of street clothes. Worker decontamination will consist of personal decontamination in a regulated area over drop plastic sheeting with a HEPA vacuum and wet methods. The first layer of coveralls must be removed when exiting the work area.
 - 3. Workers shall not eat, drink or chew gum at the worksite except in the established clean room. Smoking or using other tobacco products is prohibited.
 - 4. Workers shall be fully protected with respirators and protective clothing immediately prior to the first disturbance of asbestos-containing or contaminated material and until final cleanup is completed.
- D. Emergency Precautions
 - 1. Emergency Exits: The Contractor shall establish emergency and fire exits from the work area. Contractor shall ensure these exits are well marked and remain unobstructed.
 - 2. First Aid: The Contractor shall be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination.
 - 3. Fire Department: Contractor shall notify the local fire department of the asbestos abatement project prior to beginning work area preparation.
 - 4. Contractor shall provide fire extinguishers at all abatement work areas.
 - 5. Emergency Clean-up: Contractor to submit to the Environmental Consultant for approval, an emergency control and cleanup plan to be followed in the event of asbestos contamination during work in non-isolated work areas. Contractor shall ensure all workers are thoroughly familiar with approved plan.
- E. Building Security and Protection
 - 1. The Contractor shall post adequate warning signs at all potential entrances to work areas.
 - 2. Building Protection: Contractor shall protect all existing fixed equipment, existing building finishes that are to remain, and existing systems and functions from damage during the abatement process. Extra precautions are to be taken in protecting existing electrical panels, light fixtures, etc. Any damage to existing building, services, and/or equipment shall be remedied by the Contractor at his expense.

3. Power Failure: Contractor shall notify Environmental Consultant and Engineer immediately when a power failure occurs. Asbestos abatement work will stop and the work area will be misted with water. If power failure exceeds 15 minutes, workers shall use appropriate personnel decontamination procedures and shall seal the work area. Precautions to prevent visible emissions will be performed under the direction of the Environmental Consultant.
4. Contractor shall maintain access and use of existing fire lanes and maintain security measures to prevent unauthorized access, theft or vandalism.

3.02 NON-ISOLATED WORK AREA PREPARATION

- A. Performance: Contractor shall perform the following procedures in the order in which they are presented for work in non-isolated work areas according to the approved work plan. Any alternative control measures considered for Class II asbestos abatement work involving the removal of ACM that is not TSI, surfacing or sheet flooring materials shall be approved by the Environmental Consultant and performed in accordance with 29 CFR 1926.1101.
 1. Coordinate to ensure shut down and isolation of any HVAC equipment near work areas. Coordinate with Engineer regarding all electrical, safety and other service connections, requirements and equipment. Contractor is responsible to detect operation of systems intended to be shut down during abatement.
 2. Install critical barriers at any HVAC openings, adjacent doors, windows and other openings to work areas.
 3. Completely pre-clean visible accumulation of any debris in work area using HEPA vacuum equipment or wet cleaning methods.
 4. Set up a modified worker decontamination enclosure system as described above. Once this system is installed and abatement commences, it shall be utilized in the specified manner for decontamination of only personnel. All personnel shall sign the Worksite Entry Logbook each time they enter or exit the work area. Work performed outdoors in excavated areas shall be performed wearing two disposable suits.
 5. Cover horizontal surfaces and other objects below work area with plastic sheeting.
 6. Have emergency cleanup equipment and supplies, including HEPA vacuum, amended water, disposal bags, buckets, towels and sponges, on hand prior to start of abatement work.
- B. Compliance: No asbestos abatement work shall occur unless the work area has been found acceptable for Specification compliance by the Environmental Consultant. Notifications to perform asbestos abatement and the Hazardous Materials Inspection Summary shall be posted at the work site.

3.03 ISOLATED WORK AREA PREPARATION (NEGATIVE PRESSURE ENCLOSURE)

- A. Coordinate to ensure shut down and isolation of any HVAC equipment near work areas. Contractor shall coordinate regarding all electrical, safety and other service connections, requirements and equipment. Contractor is responsible to detect operation of systems intended to be shut down during abatement.

- B. Remove all uncontaminated removable equipment, fixtures, and supplies from the Work Area before commencing Work. Completely pre-clean and cover all unmovable furnishings or equipment with two layers of polyethylene sheeting, securely taped in place with duct tape. Such fixtures and equipment shall be considered outside the Work Area unless covering plastic or seal is breached. Contractor is responsible for any damage that these items incur while working in these areas.
- C. Install critical barriers as follows:
 - 1. Individually clean and seal all ventilation openings (supply and exhaust), doorways, lighting fixtures, floor drains and all other openings into the Work Area with two layers of reinforced polyethylene sheeting, taped securely in place with duct tape. Maintain seal until all Work is completed. Provide scaffolding and rigid post as necessary for proper structure integrity when negative pressure is applied.
 - 2. Clean and seal all lighting fixtures and HVAC diffusers with duct tape, and plastic sheeting to provide an airtight and watertight seal. Take care to avoid wrapping plastic sheeting on light fixtures, which may generate heat. Ensure that all electrical conduit connections and other electrical devices inside the Work Area that are exposed to moisture are sealed.
 - 3. Use duct tape to seal all seams of HVAC ductwork or other system components that extend through Work Area.
 - 4. Completely pre-clean visible accumulation of any debris in work area using HEPA vacuum equipment or wet cleaning methods.
 - 5. Seal all openings through the floor at columns and piping risers with a fire-stop sealant to provide an airtight and watertight separation between the Work Area and the floor below.
 - 6. Seal all doorways and openings into work areas with hard rigid barriers and cover with a layer of reinforced plastic sheeting for dust controls.
- D. Construct separate Decontamination Units in compliance with EPA, OSHA, and WISHA guidelines concerning number, size and placement of airlocks, etc. Shower in worker Decontamination Unit shall open into airlock on both contaminated and uncontaminated sides. Construct Decontamination Units of appropriate materials (including black plastic sheeting). Shower in personnel Decontamination Unit shall contain both hot and cold running water. Supply sufficient shower units to comply with OSHA regulations. Post OSHA decontamination procedures in Change Room and Equipment Room for duration of Project. Water for the showers shall be plumbed from an Engineer-designated source.
- E. Trap shower waste water using filters having a maximum pore size of 5.0 microns, and drain into a sanitary sewer. Replace contaminated filters when they become clogged but not less than every third day. Dispose of filters as contaminated waste.
- F. Submit the proposed route of exhaust of negative air pressure to Environmental Consultant prior to initiating its use. Place Work Area under negative air pressure utilizing negative air equipment. Allow no air movement system or air filtering equipment to discharge unfiltered air outside the Work Area. Maintain a negative pressure in the Work Area continuously (24 hours per day) from the start of removal of asbestos-containing material until the area is decontaminated and certified as such by the required air testing. Ensure that the air within the Work Area is changed at least once every 15 minutes, and maintain a pressure differential of at least - 0.02 inches of water between the air within the Work Area and the air outside the Work Area. Provide manometer device with paper read-out for all full enclosure/isolation Work Areas.

- G. Notify Environmental Consultant for observation and acceptance of all critical barriers, HEPA filtration systems, and Decontamination Units before proceeding with installation of Primary Barrier.
- H. Install Primary Barrier as follows:
 - 1. Clean all surfaces in Work Area using a HEPA filtered vacuum and by wet wiping prior to the installation of the Primary Barrier.
 - 2. Cover floor of Work Area with one layer of reinforced polyethylene sheeting, turned up walls at least 12 inches. Form a sharp right angle bend at junction of floor and wall so that there is no radius that could be stepped on causing the wall attachment to be pulled loose. Use spray cement and duct tape to seal all seams in floor covering.
 - 3. Cover all walls in Work Area with one layer of polyethylene sheeting, mechanically supported and sealed with duct tape and spray cement. Seal all joints, including the joining with the floor, with duct tape.
 - 4. Notify Environmental Consultant for visual review and acceptance of Work Area preparation before proceeding with installation of Secondary Barrier.
- I. Install Secondary Barrier as follows:
 - 1. Cover floor of Work Area with a second layer of polyethylene sheeting, turned up walls at least 12 inches. Form a sharp right angle bend at junction of floor and wall so there is no radius of sheeting that could be stepped on causing the wall attachment to be pulled loose. Locate seams at least six feet from, or at right angles to, seams in Primary Barrier layer. Use spray cement and duct tape to seal entire length of all seams in floor covering.
 - 2. Cover all walls in Work Area with a second layer of polyethylene sheeting. Support polyethylene sheeting on wall with duct tape; seal top of Secondary Barrier to Primary Barrier with duct tape so debris cannot get behind it.
 - 3. Install sheeting so Secondary Barrier can be removed independently of the Primary Barrier.
 - 4. Notify Environmental Consultant for visual review and acceptance of Secondary Barrier before proceeding with any abatement activities.
- J. Maintain emergency and fire exits from the Work Areas, or establish alternative exits satisfactory to fire officials.
- K. Ensure that all barriers remain effectively sealed and taped for the duration of abatement activities and subsequent cleaning. Repair damaged barriers and remedy defects immediately upon discovery. Visually inspect enclosure at the beginning of each Work period. Repair damaged barriers and remedy defects immediately upon discovery.

3.04 REMOVAL/IMPACT OF ASBESTOS-CONTAINING MATERIALS

- A. Perform all asbestos related work and comply with the general safety and health provisions in conformance with 29 CFR 1910.1001 and 29 CFR 1910.20, respectively. Remove and properly dispose of all asbestos-containing materials indicated to be removed in the Contract Documents in accordance with general work practices, and work practices for removal and encapsulation as specified in 40 CFR Part 61, 29 CFR 1926.1101, and other appropriate work procedures approved by the Environmental Protection Agency (EPA), Department of Labor and Industries, and Puget Sound Clean Air Agency, or as more stringently specified herein.

- B. Contractor shall apply spray coat of amended water to asbestos materials to be removed. Keep material damp during entire removal process. A fine mist of water shall be continuously applied to all materials being removed using mechanical methods.
- C. Contractor shall maintain a safe and uncluttered work site including staging area, work area, worker decontamination system, and waste load-out area.
- D. Contractor shall make available at all times all regulated areas for inspection by the Environmental Consultant. At no time shall access to regulated areas be restricted to any authorized personnel.
- E. Contractor shall make penetrations of/attachments to asbestos-containing materials using proper work practices and engineering controls per applicable regulations and the pre-approved Work Plan.

3.05 SELECTIVE DEMOLITION TO ACCESS MATERIALS TO BE ABATED

- A. Contractor shall only perform demolition that is described in Construction Documents. Demolition required to access asbestos materials that is not indicated on demolition plans will not be performed until approval from Engineer has been received. Contractor shall coordinate selective demolition with work of Section 02 07 00, Select Demolition.
- B. Coordinate selective demolition so as to prevent damage to concealed ACMs.

3.06 DISPOSAL

- A. Regulations: The Contractor shall determine current waste handling, transportation, and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply with these regulations and U.S. Department of Transportation, PSAPCA Regulation II, Article 4 and EPA requirements. Double-bagged material in sealed containers shall be delivered to the pre-designated disposal site.
- B. Waste Load-Out: Contractor shall coordinate activities to ensure that all asbestos- containing waste is properly containerized and removed from all work areas prior to the end of each work shift. Contractor shall prevent the accumulation of waste containers within work areas and shall ensure that all waste containers are stored in lockable, properly sealed storage container(s) approved by the Engineer at the end of each work shift.
 - 1. Protect stored items and finishes located in areas of waste load-out and entry/egress.
 - 2. Utilize waste load-out routes and times as defined in the pre-approved Work Plan.
- C. Transport: Contractor shall remove decontaminated containers from site within ten calendar days after collection for disposal at a waste disposal site operated in accordance with the provisions of 40 CFR 61.156. Notify disposal site in advance of delivery to ensure immediate disposal. Maintain chain-of-custody until accepted by the landfill.
- D. Submit disposal receipts (or "letter of acknowledgement") and chain-of custody for waste as specified. Contractor shall make available all disposal manifests and receipts upon request from the Environmental Consultant or Engineer.

END OF SECTION

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ACTION RECORD SHEET
FIBER COUNT EXCEEDING CONTROL LIMIT

PROJECT: _____ PROJ. #: _____

Date: _____ Sample No.: _____ Location: _____

Results (f/cc): _____ Control Limit:: _____ Sample Type: _____

Time On/Off: _____ Flow Rate (avg.): _____ Vol. (L): _____

Time Reported to Supervisor: _____ Time Reported to Consultant: _____

Time Abatement Stopped: _____ Time Clean-up Started: _____

Corrective Actions Implemented: _____

FOLLOW-UP AIR MONITORING DATA:

Sample No.	Date	Time On/Off	Fiber Count (f/cc)	Control Limit

Potential Source(s) of Elevated Fiber Count: _____

Preventative Actions Taken to Prevent Future Elevated Fiber Concentrations: _____

Abatement Resumed: _____ Date: _____ Time: _____

ABATEMENT SUPERVISOR:

I certify to the best of my knowledge that the information above is complete and accurate.

Name: _____ Current CAS Cert. No.: _____

Signature: _____ Date: _____

AIR SAMPLE DATA SHEET

CLIENT

DATE RECEIVED

PROJECT NAME

PROJECT NUMBER

Date Sampled				
Sampled By				
Analyst				
Lab No./Client No.				
Code				
Worker Name, Location, SS#, Activity, Personnel Prot., Etc.				
Pump No.				
Time Started				
Time Ended				
Total Minutes				
Flow Rate Start				
Flow Rate End				
Average Flow Rate				
Air Volume (L)				
Filter Area (mm ²)	385	385	385	385
Field Area (mm ²)	.00785	.00785	.00785	.00785
Blank Count				
Fiber Count				
Field Count				
Fibers/cc				
TWA Group No.				

Codes: A - Ambient air sample; B - Blank; C - Clearance Sample; EX - Excursion Sample; IWA - Inside Work Area During Abatement; OWA - Outside Work Area During Abatement; P - Personal Sample from Breathing Zone; PRE - Pre-Abatement; TEM-C - TEM Clearance Sample.

The client is requested to submit blank cassettes at a rate of 2 per 20 work samples, or a minimum of 2, from the same lot as the work samples. If not supplied to us, PBS will indicate a blank count of zero and fibers/cc may be higher than actual.



Hazardous Building Materials Assessment

**401 East Alexander Ave.
Tacoma, WA 98421**

18 June 2021



Prepared for: Port of Tacoma
One Sitcum Plaza
Tacoma, WA 98421

Prepared by: DH Environmental, Inc.
1011 SW Klickitat Way,
Suite 107
Seattle, WA 98134

Contract Number: 071257
Task Order Number: 04 & 06

EXECUTIVE SUMMARY

The Port of Tacoma retained DH Environmental, Inc. (DH Environmental) to conduct a limited hazardous building materials assessment on Building 326 located at 401 East Alexander Ave. in Tacoma, WA. DH Environmental provided an AHERA accredited building inspector to conduct the assessment on May 18th, 2021. The scope of the services included assessing drywall, caulking, associated window components, and ceiling tiles in anticipation of a forthcoming remodel.

DH Environmental assessed the area for the following hazardous building materials:

- Asbestos-containing materials (ACM)
- Polychlorinated Biphenyls (PCBs)

Ten bulk samples of suspect asbestos-containing material were collected and analyzed using polarized light microscopy (PLM). Two of the materials sampled were found to contain asbestos greater than the 1% reporting limit by PLM and are considered “Asbestos Containing Materials” by definition. However, the National Emissions Standards for Hazardous Air Pollutants (NESHAP), under the definition of friable asbestos-containing material (ACM), states that asbestos bulk samples that are less than 10% by visual polarized light microscopy (PLM) are to be analyzed by point counting. Consistent with the NESHAP, the Environmental Protection Agency (EPA) has clarified that results of point counting supersede visual PLM results. Therefore, the samples that were found to contain asbestos greater than 1% by PLM were analyzed again by EPA method 600/R-93-116 - Point Count (400 points).

The results of the Point Count (400 points) method found the materials in sample POT-KAG-ACM-09 contained 4% asbestos and POT-KAG-ACM-10 contained 4.3% asbestos. Therefore, we recommend that this work should be considered an “Asbestos Project” as defined in the Puget Sound Clean Air Agency Regulation 3, or WAC 296-62-07701, and the applicable material be removed prior to renovation.

Additional ACM Sampling June 18th, 2021

Additional sampling was conducted on June 18th, 2021. The purpose of the sampling event was to sample the wallboard systems for suspect ACM that may be impacted during the remodel. The previous sampling indicated that a layer (assumed to be the skim coat) within the gypsum wallboard system was found to contain asbestos greater than the 1% reporting limit.

Seven bulk samples of suspect asbestos-containing material were collected and analyzed using polarized light microscopy (PLM). Five of the materials sampled were found to contain asbestos greater than the 1% reporting limit by PLM and are considered “Asbestos Containing Materials” by definition.

Two samples of suspected PCB containing caulking were collected and analyzed for PCBs by EPA Method 8082. All of the samples were below the regulatory limit of 50 mg/kg for PCBs. The location of the samples collected are shown in Figure 1. Table 3 shows the results of the PCB samples.

PROJECT INFORMATION

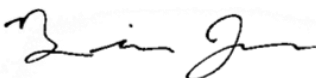

Project Title	Port of Tacoma – Building 326 401 East Alexander Ave. Tacoma, WA 98421
Assessment Conducted by	DH Environmental, Inc. 1011 SW Klickitat Way, Suite 107 Seattle, WA 98134
Project Owner	Port of Tacoma Contract Number: 071257 Task Order Number: 04 & 06
Owner's Representative	Stanley Sasser Environmental and Planning Port of Tacoma
Assessment Personnel	Brian Johnson <i>AHERA Accredited Building Inspector</i> <i>AHERA Accredited Project Designer</i> <i>WA State Lead Risk Assessor</i>
Survey Date(s)	18 May 2021, 18 June 2021
Report Delivery Date	30 June 2021
Report Prepared by	 Brian Johnson <i>AHERA Accredited Building Inspector</i> <i>AHERA Accredited Project Designer</i>
Report Reviewed by	 David Hill, PE, CHMM, CPEA Principal DH Environmental, Inc.

Table of Contents

EXECUTIVE SUMMARY	1
PROJECT INFORMATION.....	2
1.0 INTRODUCTION	5
1.1 Scope of Services.....	5
1.2 Assessment Objective	5
2.0 SITE DESCRIPTION	6
3.0 ASBESTOS CONTAINING MATERIALS ASSESSMENT	7
3.1 Applicable ACM Regulations	7
3.2 Sampling Methodology	7
3.3 Sampling Results	7
4.0 LEAD BASED PAINT (LBP) ASSESSMENT	11
4.2 LBP Sampling Methodology	11
5.0 POLYCHLORINATED BIPHENYLS (PCBS) ASSESSMENT	13
5.1 Applicable PCB Regulations.....	13
5.2 PCB Sampling Results	14
6.0 CONCLUSIONS AND RECOMMENDATIONS	15
6.1 Asbestos Containing Materials	15
6.2 Lead-Based Paint.....	15
6.3 Polychlorinated Biphenyls	15

List of Attachments

- Attachment 1 Site Photos
- Attachment 2 Laboratory Analytical Reports
- Attachment 3 Laboratory Certifications
- Attachment 4 Inspector Certifications

1.0 INTRODUCTION

The Port of Tacoma retained DH Environmental, Inc. (DH Environmental) to conduct a limited hazardous building materials assessment on Building 326 located at 401 East Alexander Ave. in Tacoma, WA. DH Environmental provided an AHERA accredited building inspector to conduct the assessment on May 18th, 2021.

1.1 Scope of Services

The scope of the services included assessing drywall, caulking, associated window components, and ceiling tiles in anticipation of a forthcoming remodel. The survey was conducted in anticipation of a forthcoming remodel in accordance with 40 CFR 763, Puget Sound Clean Air Agency Regulation III, Article 4.02(a), and the Washington State Dangerous Waste Regulations (WAC 173-303).

DH Environmental assessed the area for the following hazardous building materials:

- Asbestos-containing materials (ACM)
- Polychlorinated Biphenyls (PCBs).

1.2 Assessment Objective

The objective of this hazardous building materials assessment is to assist the Port of Tacoma with communicating the presence of ACM as well as the location, and quantity of ACM to employees, vendors, and contractors working in the project area. In addition, this assessment is meant to satisfy the requirements for an asbestos survey for the Puget Sound Clean Air Agency (PSCAA) and a good faith inspection as required by Washington State Department of Labor and Industries' Division of Occupational Safety and Health (DOSH) regulations prior to building demolition or renovation. Regulations require that a complete copy of this assessment be kept in a conspicuous location on-site at all times during activities that may impact known and suspect ACM.

2.0 SITE DESCRIPTION

Building 326 was built in the mid-1970s and is located at 401 East Alexander Ave. in Tacoma, WA. Building 326 has multiple office spaces that are utilized by various companies. The HBM survey was only conducted in the office space of Kenan Advantage Group and Safe Boats International.

3.0 ASBESTOS CONTAINING MATERIALS ASSESSMENT

3.1 Applicable ACM Regulations

The Washington State Department of Labor and Industries' Division of Occupational Safety and Health (DOSH) and the Puget Sound Clean Air Agency regulate building materials that contain more than 1 percent asbestos as ACM for protection of human health and the environment.

DOSH regulates worker exposure to airborne asbestos fibers during general work activities and construction and demolition activities (WAC 296-62-077). Worker exposure to airborne asbestos fibers must be below the Permissible Exposure Level (PEL) of an 8-hour time-weighted average (8-hr TWA) of 0.1 fiber per cubic centimeter (f/cc) of air. DOSH regulations establish engineering controls and work practices that are designed to mitigate workers exposure to asbestos in the workplace.

The Puget Sound Clean Air Agency (PSCAA) regulates the release of airborne asbestos fibers in King County and surrounding areas. Specifically, PSCAA under Article IV, Regulation III regulates emissions of asbestos during building renovation and demolition projects. This regulation requires that an asbestos survey be conducted prior to demolition, that PSCAA be notified prior to commencing with demolition activities, that ACM be removed prior to demolition, and that asbestos-containing waste materials be properly removed and disposed of in a manner that prevents the release of airborne asbestos fibers. In addition, the United States Environmental Protection Agency (USEPA) requires asbestos abatement workers and supervisors to be trained and certified in accordance with 40 CFR 763 Subpart E, Appendix C. DOSH has analogous training requirements for abatement workers in WAC 296-65. The EPA and DOSH training and certification requirements apply to abatement work for buildings at the subject property.

3.2 Sampling Methodology

The ACM sampling methodology conducted for this assessment was conducted in accordance with Puget Sound Clean Air Agency Guidance Document 66-149, Asbestos Survey Guidance Rev. 2., and related AHERA Protocols.

Samples were collected, containerized, and delivered to NVL Environmental Laboratories in Seattle, WA following standard chain of custody procedures. Suspect ACM samples were analyzed per EPA Method 600/R93/116 by Polarized Light Microscopy (PLM) analysis. NVL is a National Voluntary Laboratory Accreditation Program (NVLAP) – certified laboratory, certification number 102063-0 (see attachment 3).

3.3 Sampling Results

Ten bulk samples of suspect asbestos-containing material were collected and analyzed using polarized light microscopy (PLM). Two of the materials sampled were found to contain asbestos greater than the 1% reporting limit by PLM are considered "Asbestos Containing Materials" by definition. However, the National Emissions Standards for Hazardous Air Pollutants (NESHAP), under the definition of friable asbestos-containing material (ACM), states that asbestos bulk samples that are less than 10% by visual polarized light microscopy (PLM), are to be analyzed by point counting. Consistent with the NESHAP, the Environmental Protection Agency (EPA) has clarified that results of point counting supersede visual PLM results. Therefore, the samples that were found to

contain asbestos greater than 1% by PLM were analyzed again by EPA method 600/R-93-116 - Point Count (400 points).

Additional ACM Sampling - June 18th, 2021

Additional sampling was conducted on June 18th, 2021. The purpose of the sampling event was to sample the wallboard systems for suspect ACM that may be impacted during the remodel. Previous sampling indicated that a layer (assumed to be the skim coat) within the gypsum wallboard system was found to contain asbestos greater than the 1% reporting limit.

Seven bulk samples of suspect asbestos-containing material were collected and analyzed using polarized light microscopy (PLM). Five of the materials sampled were found to contain asbestos greater than the 1% reporting limit by PLM and are considered “Asbestos Containing Materials” by definition.

Sample ID	Material Description	Sample Location	Concentration	Material Quantity Estimate (if applicable)
POT-SB-ACM-01	Layer 1: Beige compressed fibrous material with paint	Building 326	ACM (%): ND	
POT-SB-ACM-02	Layer 1: Beige compressed fibrous material with paint	Building 326	ACM (%): ND	
POT-SB-ACM-03	Layer 1: Beige compressed fibrous material with paint	Building 326	ACM (%): ND	
POT-SB-ACM-04	Layer 1: Beige compressed fibrous material with paint	Building 326	ACM (%): ND	
POT-KAG-ACM-05	Layer 1: Beige compressed fibrous material with paint	Building 326	ACM (%): ND	
POT-KAG-ACM-06	Layer 1: Beige compressed fibrous material with paint	Building 326	ACM (%): ND	
POT-KAG-ACM-07	Layer 1: White compacted powdery material with paint Layer 2: White chalky material with paper	Building 326	ACM (%): ND	
POT-KAG-ACM-08	Layer 1: Black rubbery material Layer 2: Light brown soft mastic with paint	Building 326	ACM (%): ND	
POT-KAG-ACM-09	Layer 1: White compacted powdery material with paint Layer 2: Off-white compacted powdery material with paint Layer 3: White chalky material with paper	Building 326	ACM (%): Point Count Chrysotile 4% (Layer 2 Only)	Unknown

POT-KAG-ACM-10	Layer 1: Black rubbery material Layer 2: Light brown soft mastic Layer 3: White compacted powdery material with paint Layer 4: Light brown soft mastic Layer 5: Off-white compacted powdery material with paint	Building 326	ACM (%): Point Count Chrysotile 4.3% (Layer 5 Only)	Unknown
POT-Bldg.326-061821-ACM-01	Layer 1: White compacted powdery material with paint Layer 2: Off-white compacted powdery material with paint Layer 3: White chalky material with paper	Building 326	ACM (%): Chrysotile 3% (Layer 2 Only)	Unknown
POT-Bldg.326-061821-ACM-02	Layer 1: White compacted powdery material with paint Layer 2: Off-white compacted powdery material with paint Layer 3: White chalky material with paper	Building 326	ACM (%): Chrysotile 3% (Layer 2 Only)	Unknown
POT-Bldg.326-061821-ACM-03	Layer 1: White compacted powdery material with paint Layer 2: Off-white compacted powdery material with paint Layer 3: White chalky material with paper	Building 326	ACM (%): Chrysotile 4% (Layer 2 Only)	Unknown
POT-Bldg.326-061821-ACM-04	Layer 1: White compacted powdery material with paint Layer 2: Off-white compacted powdery material with paint Layer 3: White chalky material with paper	Building 326	ACM (%): Chrysotile 4% (Layer 2 Only)	Unknown
POT-Bldg.326-061821-ACM-05	Layer 1: White compacted powdery material with paint Layer 2: Off-white compacted powdery material with paint Layer 3: White chalky material with paper	Building 326	ACM (%): ND	Unknown

POT-Bldg.326-061821- ACM-06	Layer 1: White compacted powdery material with paint Layer 2: White compacted powdery material with paint Layer 3: Off-white compacted powdery material with paint Layer 4: White chalky material with paper	Building 326	ACM (%): Chrysotile 3% (Layer 3 Only)	Unknown
POT-Bldg.326-061821- ACM-07	Layer 1: White compacted powdery material with paint Layer 2: White chalky material with paper	Building 326	ACM (%): ND	Unknown

Table 1: ACM Sample Results
 ND: Not Detected at Reporting Limit
 NA: Not Applicable
 ACM: Asbestos Containing Material

4.0 LEAD BASED PAINT (LBP) ASSESSMENT

4.1 Applicable LBP Regulations

DOSH regulates exposure of workers in general industry (WAC 96-62-07521) and construction workers (WAC 296-155-176) to lead in the workplace. The regulations provide engineering controls and work practices to minimize worker exposures. These regulations are applicable to renovation/demolition activities that have the potential to expose workers to airborne concentrations of lead at or above the 8-hr time weighted average (TWA) action level of 30 micrograms per cubic meter (ug/m³) of air. Workers must not be exposed to lead at concentrations greater than the permissible exposure limit (PEL) of 50 ug/m³ for an 8-hr TWA. Employers are responsible for determining whether their employees will be exposed to lead. A negative exposure assessment is required, consisting of modeling or air monitoring to verify that workers are not being exposed above the action level. If an exposure assessment cannot be conducted for demolition activities, workers coming into contact with deteriorated paint and paint dust should wear a half-face respirator with a particulate cartridge, coveralls or similar full-body work clothing, gloves, safety glasses, and shoes or disposable shoe coverlets. If the negative exposure assessment reveals that workers are exposed to lead dust above the PEL, the requirements of WAC 296-62-07521 must be implemented, including training, air monitoring, and medical surveillance.

The USEPA and Washington State require generators of solid waste to determine whether their waste is a dangerous waste for proper accumulation, transportation and disposal. For demolition debris-related waste that potentially contains lead or other heavy metals, a representative sample(s) of the debris must be analyzed by the Toxicity Characteristic Leachate Procedure (TCLP) in accordance with WAC 173-303-090. Solid wastes containing leachable lead detected at a concentration of 5 mg/L or greater must be accumulated, stored, transported and disposed of as dangerous waste. Scrap metal that will be recycled is exempt from regulation as a Dangerous Waste in accordance with WAC 173-303-071(ff).

4.2 LBP Sampling Methodology

The testing of suspected lead painted surfaces was conducted by portable XRF lead-based paint analyzer. XRF instruments expose a building component to electromagnetic radiation in the form of X-rays or gamma radiation. In response to radiation, each element, including lead, emits energy at a fixed and characteristic level. Emission of characteristic x-rays is called “X-Ray Fluorescence,” or XRF. The energy released is measured by the instrument’s fluorescence detector and displayed. All of the inconclusive ranges and/or thresholds are based on an XRF detection limit of 1.0 mg/cm², which is also the lower limit for classification of lead-based paint per the U.S. Environmental Protection Agency (USEPA) and the U.S. Department of Housing and Urban Development (HUD). Although HUD regulations are not applicable to this project, the lead-based paint inspection was conducted in accordance with the methodologies set forth by the HUD and the XRF manufacturer’s guidelines. The locations of the sample collections are shown in Figures 1 through 8.

4.3 LBP Sampling Results

Sixteen locations on the interior and exterior were analyzed using an X-ray fluorescence analyzer (XRF). None of the locations were found to contain lead above the Federal lead-based paint concentration criteria of 1 mg/cm². Table 2 represents the areas that were tested during the assessment.

Reading #	Space Name	Component	Substrate	Color	Concentration	Notes
Reading # 1	Building 326 Interior	Wall	Drywall	Off White	Lead Concentration: ND	
Reading # 2	Building 326 Interior	Wall	Drywall	Off White	Lead Concentration: ND	
Reading # 3	Building 326 Interior	Wall	Drywall	Off White	Lead Concentration: ND	
Reading # 4	Building 326 Interior	Wall	Drywall	Off White	Lead Concentration: ND	
Reading # 5	Building 326 Interior	Window Frame	Metal	Off White	Lead Concentration: ND	
Reading # 6	Building 326 Interior	Window Frame	Metal	Off White	Lead Concentration: ND	
Reading # 7	Building 326 Interior	Window Frame	Metal	Off White	Lead Concentration: ND	
Reading # 8	Building 326 Interior	Window Frame	Metal	Off White	Lead Concentration: ND	
Reading # 9	Building 326 Exterior	Siding	Wood	Blue	Lead Concentration: ND	
Reading # 10	Building 326 Exterior	Window Frame	Wood	Grey	Lead Concentration: ND	
Reading # 11	Building 326 Exterior	Window Frame	Wood	Grey	Lead Concentration: ND	
Reading # 12	Building 326 Exterior	Window Frame	Wood	Grey	Lead Concentration: ND	
Reading # 13	Building 326 Exterior	Window Frame	Wood	Grey	Lead Concentration: ND	
Reading # 14	Building 326 Exterior	Window Frame	Wood	Grey	Lead Concentration: ND	
Reading # 15	Building 326 Exterior	Window Frame	Wood	Blue	Lead Concentration: ND	
Reading # 16	Building 326 Exterior	Window Frame	Wood	Blue	Lead Concentration: ND	

Table 2: LBP Sample Results
ND: Not Detected at Reporting Limit
mg/cm²: milligrams per Square Centimeter
LBP: Lead Based Paint

5.0 POLYCHLORINATED BIPHENYLS (PCBS) ASSESSMENT

5.1 Applicable PCB Regulations

Common PCB building materials include caulking, paint, and adhesives. Current regulations require the removal of building materials containing PCBs if found with concentrations of 50 parts per million (ppm) or greater. Reinforcing this regulatory interpretation, EPA's current policy is clearly stated on the agency's website under a page titled Current Best Practices for PCBs in Caulk Fact Sheet - Removal and Clean-Up of PCBs in Caulk and PCB-Contaminated Soil and Building Material¹. The website states the following: "Caulk containing PCBs at concentrations > 50 ppm is not authorized for use and must be removed and properly disposed. When disposed, the caulk must be managed as PCB bulk product waste, defined at 40 CFR §761.3. Regulations governing the cleanup and disposal of PCB bulk product waste are provided at 40 CFR §761.62. PCB-containing caulk or caulk coated building material containing PCBs at concentrations > 50 ppm must be removed unless otherwise approved by EPA under a risk-based disposal approval issued under 40 CFR § 761.62(c)."

PCBs are also contained within the fluorescent lamp capacitors and interior potting material of old, magnetic lighting fixtures. The capacitor regulates the amount of electricity flowing into the lighting fixture, and the potting material insulates the FLB and reduces the "humming" noise. Because all PCB-containing fluorescent light ballasts currently in use have exceeded their designated life span, they are susceptible to leaking or rupturing. This may lead to increased exposure to building occupants. Residues from these sources are difficult and costly to clean up. Additionally, intact PCB-containing fluorescent light ballasts may emit small amounts of PCBs into the air during normal use of the lighting fixtures.

EPA recommends all PCB-containing fluorescent light ballasts be removed from lighting fixtures. The fluorescent light ballasts and capacitors are regulated in concentrations greater than 50 mg/kg by the USEPA, and at concentrations greater than 2 mg/kg by the Washington State Department of Ecology. In accordance with 40 CFR 761.2, "any person must assume that a capacitor manufactured prior to July 2, 1979, whose PCB concentration is not established contains ≥500 ppm PCBs. Any person may assume that a capacitor manufactured after July 2, 1979, is non-PCB (i.e., <50 ppm PCBs). If the date of manufacture is unknown, any person must assume the capacitor contains ≥500 ppm PCBs. Any person may assume that a capacitor marked at the time of manufacture with the statement "No PCBs" in accordance with § 761.40(g) is non-PCB."

Although the Washington State Department of Ecology does regulate PCBs at 2 ppm, which is lower than the USEPA regulatory limit of 50 ppm under the Toxic Substance Control Act, this only applies to discarded transformers, capacitors or bushings containing PCBs at concentrations of 2 ppm or greater (except when drained of all free flowing liquid) and the following wastes generated from the salvaging, rebuilding, or discarding of transformers, capacitors or bushings containing PCBs at concentrations of 2 ppm or greater:

Cooling and insulating fluids and cores, including core papers. PCBs in hazardous building materials such as paint and caulking are not subject to the 2 ppm regulatory limit under the Dangerous Waste Regulations.

5.2 PCB Sampling Results

Two samples of suspected PCB containing materials were collected and analyzed for PCBs by EPA Method 8082. The samples were below the regulatory limit of 50 mg/kg for PCBs. The location of the samples collected are shown in Figures 6. Table 3 below shows the results of the PCB sample.

Sample ID	Material Description	Sample Location	Concentration	Material Quantity Estimate (if applicable)
POT-KAG-PCB-01	Caulking	Building 326	PCBs (mg/kg): ND	NA
POT-KAG-PCB-02	Caulking	Building 326	PCBs (mg/kg): ND	NA

Table 3: PCB Sample Results
 mg/kg: milligrams per kilogram (parts per million)
 ND: Not Detected at Reporting Limit
 PCB: Polychlorinated Biphenyls

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Asbestos Containing Materials

Two of the materials sampled and analyzed were found to contain asbestos greater than the 1% reporting limit by PLM and are considered “Asbestos Containing Materials” by definition. However, the National Emissions Standards for Hazardous Air Pollutants (NESHAP), under the definition of friable asbestos-containing material (ACM), states that asbestos bulk samples that are less than 10% by visual polarized light microscopy (PLM), are to be analyzed by point counting. Consistent with the NESHAP, the Environmental Protection Agency (EPA) has clarified that results of point counting supersede visual PLM results. Therefore, the samples that were found to contain asbestos greater than 1% by PLM were analyzed again by EPA method 600/R-93-116 - Point Count (400 points).

The results of the Point Count (400 points) method found the materials in sample POT-KAG-ACM-09 contained 4% asbestos and POT-KAG-ACM-10 contained 4.3% asbestos. Therefore, we recommend that this work should be considered an “Asbestos Project” as defined in the Puget Sound Clean Air Agency Regulation 3, or WAC 296-62-07701, and the applicable material be removed prior to renovation.

Additional ACM Sampling June 18th, 2021

Additional sampling was conducted on June 18th, 2021. The purpose of the sampling event was to sample the wallboard systems for suspect ACM that may be impacted during the remodel. Previous sampling indicated that a layer (assumed to be the skim coat) within the gypsum wallboard system was found to contain asbestos greater than the 1% reporting limit.

Seven bulk samples of suspect asbestos-containing material were collected and analyzed using polarized light microscopy (PLM). Five of the materials sampled were found to contain asbestos greater than the 1% reporting limit by PLM and are considered “Asbestos Containing Materials” by definition. Therefore, we recommend that this work should be considered an “Asbestos Project” as defined in the Puget Sound Clean Air Agency Regulation 3, or WAC 296-62-07701, and the applicable material be removed prior to renovation.

6.2 Lead-Based Paint

Lead was not detected in the building materials sampled. Therefore, we have no recommendations specific to LBP handling or disposal for this project as defined.

6.3 Polychlorinated Biphenyls

Two samples of suspected PCB containing caulking were collected and analyzed for PCBs by EPA Method 8082. All samples were below the regulatory limit of 50 mg/kg for PCBs. Therefore, we have no recommendations specific to PCB handling or disposal for this project as defined.

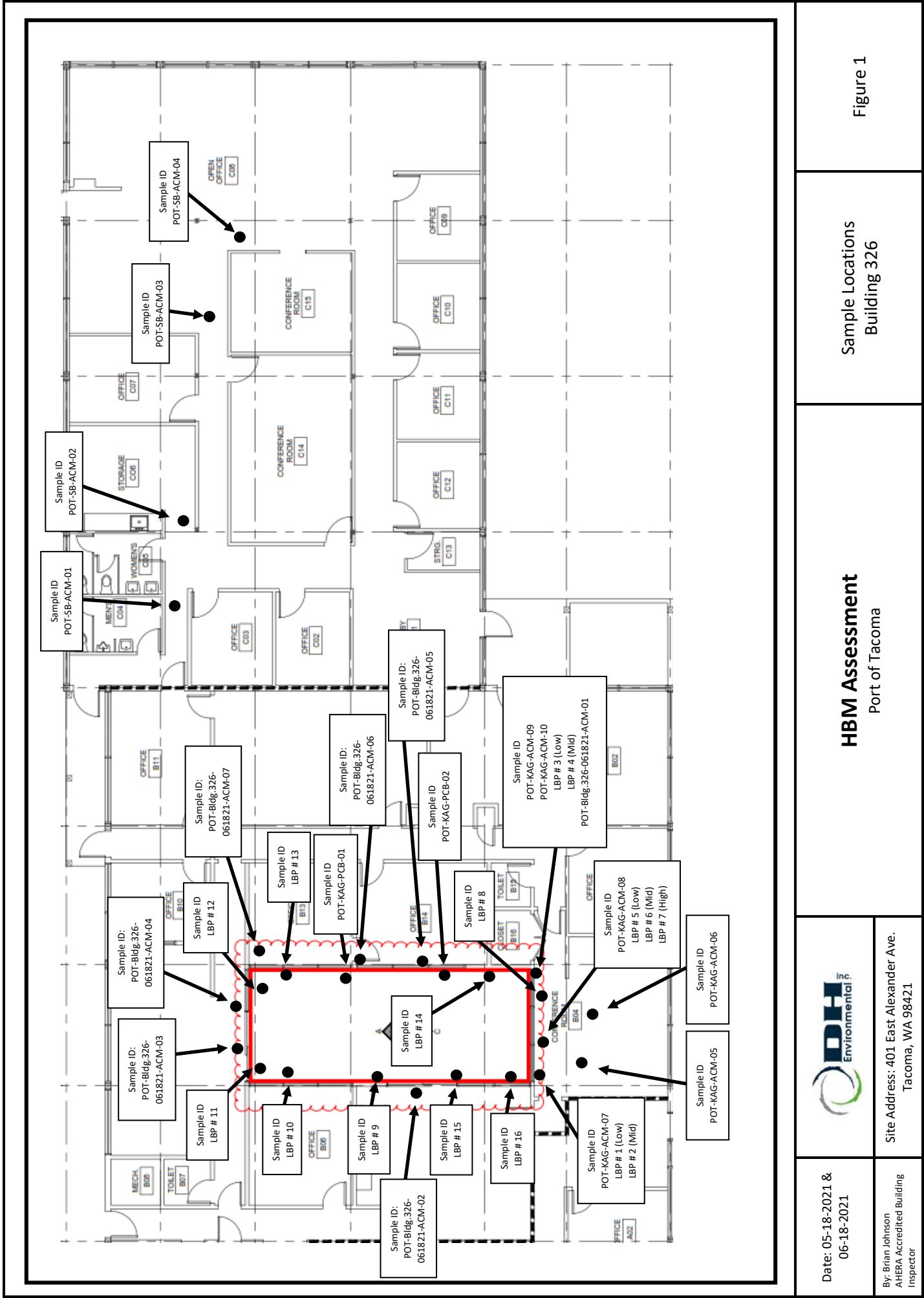
7.0 LIMITATIONS

This report presents the results of the hazardous building materials assessment conducted at the Port of Tacoma (Building 326) located at 401 East Alexander Ave. in Tacoma, WA. The assessment was conducted with the objective of identifying hazardous building materials in anticipation of an upcoming remodel in accordance with certain regulations requiring such identification. For example, 40 CFR 763, along with Puget Sound Clean Air Agency Regulation III, Article 4.02(a), requires an “Asbestos Survey” before the renovation or demolition of a building. In addition, the Washington State Dangerous Waste Regulations (WAC 173-303) requires identification and designation of solid waste prior to disposal. This includes suspect lead-based paint and building materials.

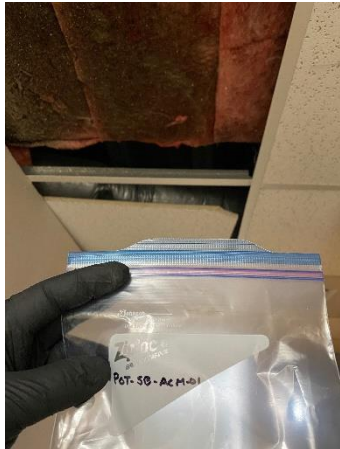
Our assessment has considered risks pertaining to asbestos and lead in paint. Our assessment is limited to only those locations and materials assessed. This assessment was not designed to identify all potential concerns or to eliminate all risks associated with renovation, demolition, construction, waste disposal, or transferring of property title. Evaluation of other risks not specifically described in the Scope of Work have not been included. For example, the following risks were not assessed: structural integrity, engineering loads, electrical, mechanical, radon gas, slope stability, building settlement, and evaluation of toxic and hazardous substances in, or in contact with, soil and groundwater. No warranty, expressed or implied, is made. DH Environmental has performed the services set forth in the Scope of Work in accordance with generally accepted practices in the same or similar localities, related to the nature of the work accomplished, at the time the services were performed.

The hazardous building materials assessment presented in this report represents the conditions and materials observed on the dates we conducted the sampling and visually inspected the building. This assessment report is intended for the exclusive use by the Port of Tacoma for specific application to the referenced property. This assessment does not replace or should be used in lieu of professionally developed construction or demolition plans, specifications, or bidding documents. This report is not a legal opinion.

Figure 1 Sampling Locations – Building 326



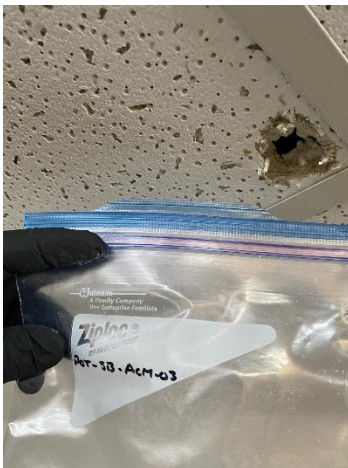
Attachment 1 Site Photos



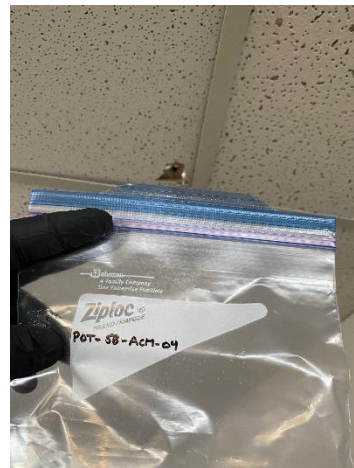
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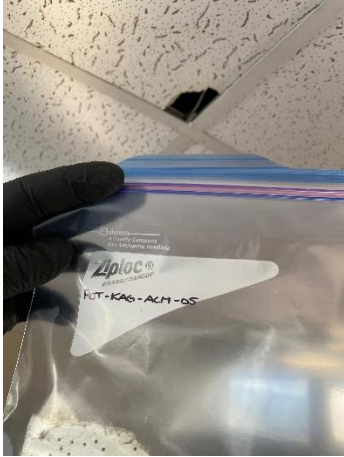
Photo: POT-SB-ACM-02



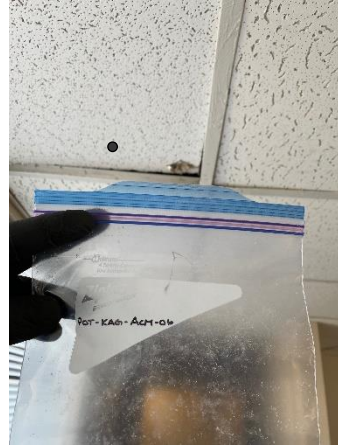
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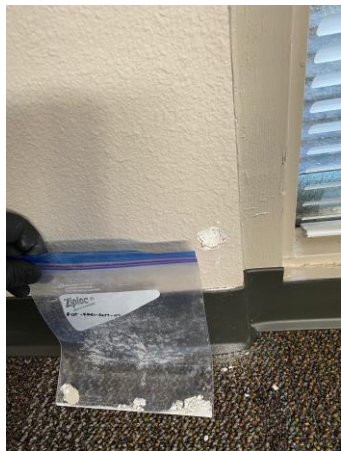
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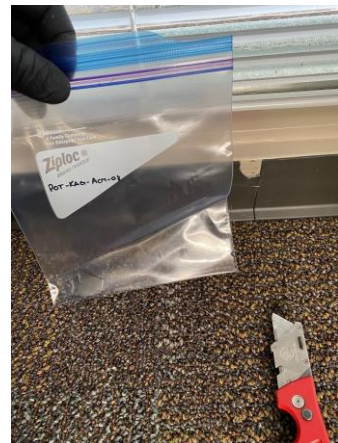
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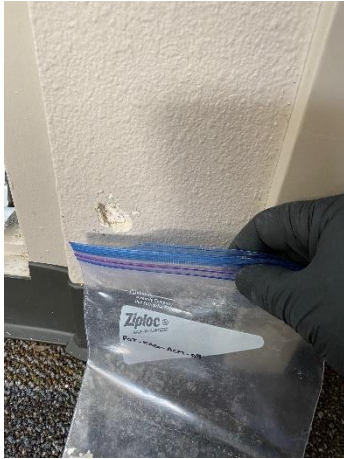
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Sample ID: POT-KAG-ACM-07



Sample ID: POT-KAG-ACM-08



Sample ID: POT-KAG-ACM-09



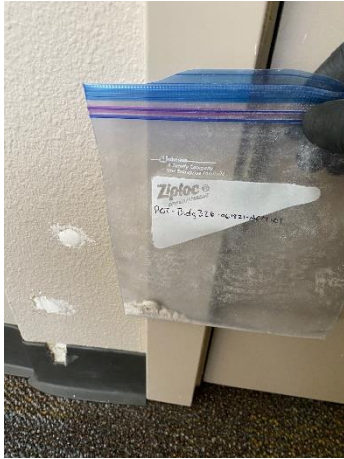
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Sample ID: POT-KAG-PCB-01



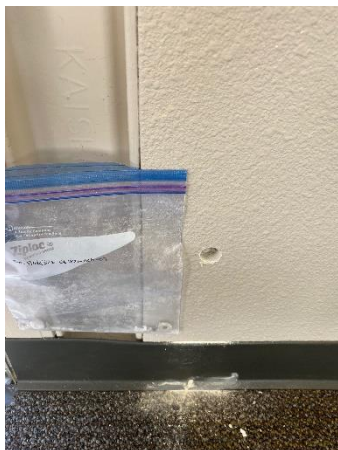
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Sample ID: POT-Bldg326-061821-ACM-01



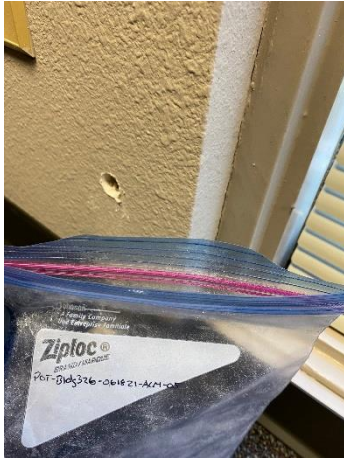
Sample ID: POT-Bldg326-061821-ACM-02



Sample ID: POT-Bldg326-061821-ACM-03



Sample ID: ID: POT-Bldg326-061821-ACM-04



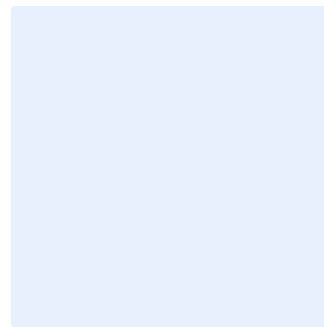
Sample ID: POT-Bldg326-061821-ACM-05



Sample ID: POT-Bldg326-061821-ACM-06



Sample ID: POT-Bldg326-061821-ACM-07



Sample ID:

Attachment 2 Laboratory Analytical Reports

May 26, 2021



Brian Johnson
DH Environmental
1011 SW Klickitat Way Suite 107
Seattle, WA 98134

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2108981.00

Client Project: POT-Bldg. 326
Location: Tacoma, WA

Dear Mr. Johnson,

Enclosed please find test results for the 10 sample(s) submitted to our laboratory for analysis on 5/18/2021.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with **U. S. EPA 40 CFR Appendix E to Subpart E of Part 763**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116**, Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nick Ly'.

Nick Ly, Technical Director



The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It consists of the letters 'NVLAP' in a large, stylized, outlined font.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental

Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson

Project Location: Tacoma, WA

Batch #: 2108981.00

Client Project #: POT-Bldg. 326

Date Received: 5/18/2021

Samples Received: 10

Samples Analyzed: 10

Method: EPA/600/R-93/116

Lab ID: 21060897 **Client Sample #: POT-SB-ACM-01**

Location: Tacoma, WA

Layer 1 of 1 **Description:** Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Paint, Perlite	Cellulose 69%
Fine particles	Glass fibers 27%

Asbestos Type: %
None Detected ND

Lab ID: 21060898 **Client Sample #: POT-SB-ACM-02**

Location: Tacoma, WA

Layer 1 of 1 **Description:** Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Paint, Perlite	Cellulose 65%
Fine particles	Glass fibers 30%

Asbestos Type: %
None Detected ND

Lab ID: 21060899 **Client Sample #: POT-SB-ACM-03**

Location: Tacoma, WA

Layer 1 of 1 **Description:** Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Paint, Perlite	Cellulose 62%
Fine particles	Glass fibers 34%

Asbestos Type: %
None Detected ND

Lab ID: 21060900 **Client Sample #: POT-SB-ACM-04**

Location: Tacoma, WA

Layer 1 of 1 **Description:** Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Paint, Perlite	Cellulose 65%
Fine particles	Glass fibers 32%

Asbestos Type: %
None Detected ND

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Nick Ly

Date: 05/25/2021

Date: 05/26/2021

Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental
Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson
Project Location: Tacoma, WA

Batch #: 2108981.00
Client Project #: POT-Bldg. 326
Date Received: 5/18/2021
Samples Received: 10
Samples Analyzed: 10
Method: EPA/600/R-93/116

Lab ID: 21060901 Client Sample #: POT-KAG-ACM-05

Location: Tacoma, WA

Layer 1 of 1 Description: Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Paint, Perlite	Cellulose 60%
Fine particles, Glass debris	Glass fibers 36%

Asbestos Type: %
None Detected ND

Lab ID: 21060902 Client Sample #: POT-KAG-ACM-06

Location: Tacoma, WA

Layer 1 of 1 Description: Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Paint, Perlite	Cellulose 61%
Fine particles, Glass debris	Glass fibers 36%

Asbestos Type: %
None Detected ND

Lab ID: 21060903 Client Sample #: POT-KAG-ACM-07

Location: Tacoma, WA

Layer 1 of 2 Description: White compacted powdery material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%
Paint, Calcareous binder, Calcareous particles	None Detected ND

Asbestos Type: %
None Detected ND

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%
Gypsum/Binder, Fine particles	Cellulose 38%

Asbestos Type: %
None Detected ND

Lab ID: 21060904 Client Sample #: POT-KAG-ACM-08

Location: Tacoma, WA

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Nick Ly

Date: 05/25/2021

Date: 05/26/2021

Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental

Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson

Project Location: Tacoma, WA

Batch #: 2108981.00

Client Project #: POT-Bldg. 326

Date Received: 5/18/2021

Samples Received: 10

Samples Analyzed: 10

Method: EPA/600/R-93/116

Layer 1 of 2	Description: Black rubbery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Rubber/Binder, Fine particles	None Detected ND	
Layer 2 of 2	Description: Light brown soft mastic with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Paint, Fine particles	None Detected ND	

Lab ID: 21060905 **Client Sample #: POT-KAG-ACM-09**

Location: Tacoma, WA

Layer 1 of 3	Description: White compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 2 of 3	Description: Off-white compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 3 of 3	Description: White chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Gypsum/Binder, Fine particles	Cellulose 35%	

Lab ID: 21060906 **Client Sample #: POT-KAG-ACM-10**

Location: Tacoma, WA

Layer 1 of 5	Description: Black rubbery material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Rubber/Binder, Fine particles	None Detected ND	
Layer 2 of 5	Description: Light brown soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Fine particles	None Detected ND	

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Nick Ly

Date: 05/25/2021

Date: 05/26/2021

Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental

Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson

Project Location: Tacoma, WA

Batch #: 2108981.00

Client Project #: POT-Bldg. 326

Date Received: 5/18/2021

Samples Received: 10

Samples Analyzed: 10

Method: EPA/600/R-93/116

Layer 3 of 5	Description: White compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 4 of 5	Description: Light brown soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Mastic/Binder, Fine particles	None Detected ND	
Layer 5 of 5	Description: Off-white compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	

Chrysotile 3%

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Nick Ly

Date: 05/25/2021

Date: 05/26/2021

Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

ASBESTOS LABORATORY SERVICES



Company DH Environmental
Address 1011 SW Klickitat Way Suite 107
 Seattle, WA 98134
Project Manager Mr. Brian Johnson
Phone (206) 934-4043
NVL Batch Number 2108981.00
TAT 5 Days **AH** No
Rush TAT
Due Date 5/25/2021 **Time** 3:45 PM
Email brian.johnson@dhenviro.com
Fax (206) 930-4043

Project Name/Number: POT-Bldg. 326 **Project Location:** Tacoma, WA

Subcategory PLM Bulk

Item Code ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 10

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	21060897	POT-SB-ACM-01		A
2	21060898	POT-SB-ACM-02		A
3	21060899	POT-SB-ACM-03		A
4	21060900	POT-SB-ACM-04		A
5	21060901	POT-KAG-ACM-05		A
6	21060902	POT-KAG-ACM-06		A
7	21060903	POT-KAG-ACM-07		A
8	21060904	POT-KAG-ACM-08		A
9	21060905	POT-KAG-ACM-09		A
10	21060906	POT-KAG-ACM-10		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Michael Jenkins		NVL	5/18/21	1545
Analyzed by	Michael Jenkins		NVL	5/25/21	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 5/18/2021
 Time: 4:14 PM
 Entered By: Fatima Khan



2108981

**ASBESTOS
CHAIN OF CUSTODY**

- ☐ 1 hour ☐ 24 Hours ☐ 4 Days
☐ 2 Hours ☐ 2 Days ☒ 5 Days
☐ 4 Hours ☐ 3 Days ☐ 10 Days

Please call for TAT less than 24 Hours

Company DH Environmental
Address 1011 SW Klickitat Way
Seattle, WA 98134
Phone _____

Project Manager Brian Johnson
Cell (206) 930-4043
Email brian.johnson@dhenviro.com
Fax () - _____

Project Name/Number POT-Bldg 326 Project Location Tacoma, WA

- ☐ PCM Air (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II Modified)
☒ PLM (EPA 600/R-93-116) ☐ EPA 400 Points (600/R-93-116) ☐ EPA 1000 Points (600/R-93-116)
☐ PLM Gravimetry (600/R-93-116) ☐ Asbestos in Vermiculite (EPA 600/R-04/004) ☐ Asbestos in Sediment (EPA 1900 Points)
☐ Asbestos Friable/Non-Friable (EPA 600/R-93/116) ☐ Other _____

Reporting Instructions Please send results to Brian Johnson

☐ Call () - _____ ☐ Fax () - _____ ☒ Email brian.johnson@dhenviro.com

Total Number of Samples 10

	Sample ID	Description	A/R
1	POT-SB-ACM-01	Ceiling tile	
2	POT-SB-ACM-02	Ceiling tile	
3	POT-SB-ACM-03	Ceiling tile	
4	POT-SB-ACM-04	Ceiling tile	
5	POT-KAG-ACM-05	Ceiling tile	
6	POT-KAG-ACM-06	Ceiling tile	
7	POT-KAG-ACM-07	Drywall	
8	POT-KAG-ACM-08	Coving & mastic	
9	POT-KAG-ACM-09	Drywall	
10	POT-KAG-ACM-10	Coving & mastic	
11			
12			
13			
14			
15			

	Print Name	Signature	Company	Date	Time
Sampled by	Brian Johnson		DH Env.	5-18-21	0915
Relinquish by	Brian Johnson		DH Env.	5-18-21	1530

Office Use Only

	Print Name	Signature	Company	Date	Time
Received by	Michael		NVL	5/18/21	1545 DB
Analyzed by					
Called by					
Faxed/Email by					

May 25, 2021



Mr. Brian Johnson

DH Environmental
1011 SW Klickitat Way, Suite 107
Seattle, WA 98134

Re: **NVL Batch 2109018.00**

Project Name/Number: POT-Bldg. 326

Project location: Tacoma, WA

Dear Mr. Johnson,

Enclosed please find test results for samples submitted to our laboratory for analysis. Preparation and analysis of these samples were conducted in accordance with published industry standards and methods specified on the attached analytical report.

The content of this package consists of the following:

- Case Narrative & Definition of Data Qualifiers
- Analytical Test Results
- Applicable QC Summary
- Client Chain-of-Custody (CoC)
- NVL Receiving Record

The report is considered highly confidential and will not be released without your approval. Samples are archived for two weeks following analysis. Samples that are not retrieved by the client will be discarded after two weeks.

Thank you for using our laboratory services. If you need further assistance, please contact us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

Enclosure: Sample Results

**Case Narrative:**

The following summarizes samples received on date as shown on the accompanied Chain of custody by NVL Laboratories, Inc. from DH Environmental for Project Number POT-Bldg. 326. Samples were logged in for PCB analysis per client request using both customer sample ID's and laboratory assigned ID's as listed on the Chain-of-Custody (CoC). All samples as received were processed and analyzed within specified turnaround time without any abnormalities and deviations that may affect the analytical results. All quality control requirements were acceptable unless stated otherwise. The conditions of all samples were acceptable at time of receipt and all samples submitted with this batch were analyzed unless stated otherwise on the CoC.

Test Results are reported in milligram per kilogram (mg/kg) for PCB samples as shown on the analytical reports.



Definition Appendix

Terms

% Rec	Percent recovery.
<	Below Reporting Limit(RL) or Limit of Quantitation(LoQ) of the instrument.
B	Blank contamination. The recorded results is associated with a contaminated blank.
DF	Dilution Factor
J	The reported concentration is an estimated value because something may be present in the sample that interfered with the analysis.
J1	The reported concentration is an estimated value because the laboratory control sample (LCS) is out of control limits.
J2	The reported concentration is an estimated value because the percent recovery for matrix spike is out of control limits.
J3	The reported concentration is an estimated value because the relative percent difference(RPD) for duplicate analysis is out of control limits.
J4	Percent recovery is outside of established control limits.
LCS	Laboratory Control Sample.
LFS	Laboratory Fortified Spike
Limits	The upper and lower control limits for spike recoveries.
LN	Quality control sample is outside of control limits. This analyte was not detected in the sample.
LOQ	Limit of quantitation(same as RL)
mg/kg	Milligrams per kilogram.
ND	Analyte not detected or below the reporting limit of the instrument or methodology



Definition Appendix

Terms

PPM	Parts per Million.
QC Batch Group	Quality Control Batch Group. The entity that links analytical results and supporting quality control results.
R	The data are not reliable due to possible contamination or loss of material during preparation or analysis. Re-sampling and reanalysis are necessary for verification.
RL	Reporting Limit. The minimum concentration that can be quantified under routine operating conditions.
RPD	Relative Percent Difference. The relative difference between duplicate results(matrix spike, blank spike, or samples duplicate) expressed as a percentage.
RPD Limit	The maximum RPD allowed for a set of duplicate measurements(see RPD).
SMI	Surrogate has matrix interference.
Spike Conc.	The measured concentration, in sample basis units, of a spiked sample.
SURR-ND	Surrogate was not detected due to matrix interference or dilution.
ug/m3	Micrograms per cubic meter.
ug/mL	Micrograms per milliliter
mg/Kg	milligram per kilogram

ANALYSIS REPORT



Polychlorinated Biphenyls by Gas Chromatography

Client	DH Environmental	Samples Received*	2
SDG Number	2109018.00	Analyzed By	Shalini Patel
Date Reported	05/25/2021	Samples Analyzed*	2
Project Number	POT-Bldg. 326	Analysis Method	8082A
Location	Tacoma, WA	Preparation Method	3546PR (PCB)

* for this test only

Sample Number	POT-KAG-PCB-01	Received	05/18/2021
Lab Sample ID	21061031	Matrix	Material
Initial Sample Size	2.146 gm	Units of Result	mg/Kg, as received

Analyte	RL	Final Result	Analysis Date
Aroclor-1016	0.93	< 0.93	05/20/2021
Aroclor-1221	0.93	< 0.93	05/20/2021
Aroclor-1232	0.93	< 0.93	05/20/2021
Aroclor-1242	0.93	< 0.93	05/20/2021
Aroclor-1248	0.93	< 0.93	05/20/2021
Aroclor-1254	0.93	< 0.93	05/20/2021
Aroclor-1260	0.93	< 0.93	05/20/2021
PCBs, Total	0.93	<0.93	

Sample Number	POT-KAG-PCB-02	Received	05/18/2021
Lab Sample ID	21061032	Matrix	Material
Initial Sample Size	1.1095 gm	Units of Result	mg/Kg, as received

Analyte	RL	Final Result	Analysis Date
Aroclor-1016	1.8	< 1.8	05/20/2021
Aroclor-1221	1.8	< 1.8	05/20/2021
Aroclor-1232	1.8	< 1.8	05/20/2021
Aroclor-1242	1.8	< 1.8	05/20/2021
Aroclor-1248	1.8	< 1.8	05/20/2021
Aroclor-1254	1.8	< 1.8	05/20/2021
Aroclor-1260	1.8	< 1.8	05/20/2021
PCBs, Total	1.8	<1.8	

Comments: Reporting limit raised due to small sample size.

Quality Control Results

Project Number:	POT-Bldg. 326	SDG Number:	2109018
		Project Manager:	Brian Johnson
QC Batch(es):	Q1387	Analysis Method:	8082A
QC Batch Method:	3546PR (PCB)	Analysis Description:	Polychlorinated Biphenyls by Gas Chromatography
Preparation Date:	05/20/2021		
Blank: MBLK-2109018			

Analyte	Blank Result	Units	DF	RL	Control Limit	Qualifiers
Aroclor-1016	ND	mg/Kg	1	1	1.0	
Aroclor-1221	ND	mg/Kg	1	1	1.0	
Aroclor-1232	ND	mg/Kg	1	1	1.0	
Aroclor-1242	ND	mg/Kg	1	1	1.0	
Aroclor-1248	ND	mg/Kg	1	1	1.0	
Aroclor-1254	ND	mg/Kg	1	1	1.0	
Aroclor-1260	ND	mg/Kg	1	1	1.0	
PCBs, Total	ND	mg/Kg	1	1	1.0	
<i>Surrogates:</i>				% Rec		
Tetrachloro-m-xylene			1	65	40-140	
Decachlorobiphenyl			1	89	40-140	

Lab Control Sample: LCS-1254-2109018

Analyte	Blank Spike Result	Units	DF	Spike Conc.	% Rec	% Rec Limits	Qualifiers
Aroclor-1254	19.1	mg/Kg	1	20.0	95	40-140	
<i>Surrogates:</i>							
Tetrachloro-m-xylene			1		80	40-140	
Decachlorobiphenyl			1		95	40-140	

Lab Control Sample: LCS-1016+1260-2109018

Lab Control Sample Duplicate: LCS Dup-1016+1260

Analyte	Blank Spike Result	Units	DF	Spike Conc.	% Rec	Limits	RPD	RPD Limit	Qualifiers
Aroclor-1016	15.7	mg/Kg	1	20.0	79	40-140			
	14.3			20.0	71	40-140	9.8	50	
Aroclor-1260	16.2	mg/Kg	1	20.0	81	40-140			
	14.9			20.0	74	40-140	8.5	50	
<i>Surrogates:</i>									
Tetrachloro-m-xylene			1		61	40-140			
					51	40-140			
Decachlorobiphenyl			1		91	40-140			
					79	40-140			



Surrogate Recovery Summary Report

Client	<u>DH Environmental</u>			SDG Number	<u>2109018</u>
Project	<u>POT-Bldg. 326</u>				
Customer Sample ID	Lab Sample ID	Analyte	Recovery	Limits	
POT-KAG-PCB-01	21061031	Decachlorobiphenyl	60%	40-140	
POT-KAG-PCB-01	21061031	Tetrachloro-m-xylene	46%	40-140	
POT-KAG-PCB-02	21061032	Decachlorobiphenyl	74%	40-140	
POT-KAG-PCB-02	21061032	Tetrachloro-m-xylene	67%	40-140	
LCS Dup-1016+1260	LCS Dup-1016+1260	Decachlorobiphenyl	79%	40-140	
LCS Dup-1016+1260	LCS Dup-1016+1260	Tetrachloro-m-xylene	51%	40-140	
LCS-1016+1260-2109018	LCS-1016+1260-2109018	Decachlorobiphenyl	91%	40-140	
LCS-1016+1260-2109018	LCS-1016+1260-2109018	Tetrachloro-m-xylene	61%	40-140	
LCS-1254-2109018	LCS-1254-2109018	Decachlorobiphenyl	95%	40-140	
LCS-1254-2109018	LCS-1254-2109018	Tetrachloro-m-xylene	80%	40-140	
MBLK-2109018	MBLK-2109018	Decachlorobiphenyl	89%	40-140	
MBLK-2109018	MBLK-2109018	Tetrachloro-m-xylene	65%	40-140	

* Recovery outside limits



INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No: **2109018**Contract: **N/A**Determination: **8082 PCB Aroclors <Material>**

Run	Sample	Source	Analyzed	Analyte	True	Found	Unit	% Rec	Limits
R001380	CCV1- 1016 -1260	PCB_2021-1-2	05/20/2021	Aroclor-1016	5	5	ug/mL	100	80-120
		PCB_2021-1-2	05/20/2021	Aroclor-1260	5	5	ug/mL	100	80-120
	CCV1- 1254	PCB_2021-1-3	05/20/2021	Aroclor-1254	5	5	ug/mL	100	80-120
	ICV 1016-1254- 1260	PCB_2021-1-4	05/20/2021	Aroclor-1016	5	4.767	ug/mL	95	85-115
		PCB_2021-1-4	05/20/2021	Aroclor-1254	5	5.288	ug/mL	106	85-115
		PCB_2021-1-4	05/20/2021	Aroclor-1260	5	4.344	ug/mL	87	85-115
	CCV2- 1016 - 1260	PCB_2021-1-2	05/20/2021	Aroclor-1016	5	5.385	ug/mL	108	80-120
		PCB_2021-1-2	05/20/2021	Aroclor-1260	5	5.441	ug/mL	109	80-120
	CCV2-1254	PCB_2021-1-3	05/20/2021	Aroclor-1254	5	5.404	ug/mL	108	80-120

% Rec = Percent recovery

* = Percent recovery not within control limits

ORGANICS LABORATORY SERVICES



Company DH Environmental

Address 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Project Manager Mr. Brian Johnson

Phone (206) 934-4043

NVL Batch Number **2109018.00**

TAT 5 Days AH No

Rush TAT _____

Due Date 5/25/2021 Time 3:45 PM

Email brian.johnson@dhenviro.com

Fax (206) 930-4043

Project Name/Number: POT-Bldg. 326

Project Location: Tacoma, WA

Subcategory Quantitative analysis

Item Code ORG-05

Method 8082 PCB Aroclors <Bulk>

Total Number of Samples 2

Rush Samples _____

	Lab ID	Sample ID	Description	A/R
1	21061031	POT-KAG-PCB-01		A
2	21061032	POT-KAG-PCB-02		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Michael Jenkins		NVL	5/18/21	1545
Analyzed by	<i>Shelvin Pety</i>	<i>CD</i>	NVL	5/20/21	1300
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					
Special Instructions:					

Entered By: Kelly AuVu

Date 5/19/2021

Time: 11:12 AM

1 of 1

2109018



PCB'S CHAIN OF CUSTODY

Turn Around Time

- ☐ 1 Hour ☐ 24 Hours ☐ 4 Days
☐ 2 Hours ☐ 2 Days ☒ 5 Days
☐ 4 Hours ☐ 3 Days ☐ 10 Days

Please call for TAT less than 24 Hours

Company DH Environmental Project Manager Brian Johnson
 Address 1011 SW Klickitat Way Cell (206) 930-4043
Seattle, WA 98134 Email _____
 Phone _____ Fax () - _____

Project Name/Number POT-Bldg 326 Project Location Tacoma, WA

- ☐ PCB's Air ☒ PCB's Bulk
☐ PCB Wipe ☐ PCB BTEX

Reporting Instructions Please send results to Brian Johnson

☐ Call () - ☐ Fax () - ☒ Email brian.johnson@dhenviro.com

Total Number of Samples 2

	Sample ID	Description	A/R
1	POT-KAG-PCB-01	Caulking	
2	POT-KAG-PCB-02	Caulking	
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

	Print Name	Signature	Company	Date	Time
Sampled by	Brian Johnson		DH Env.	5-18-21	1800
Relinquish by	Brian Johnson		DH Env.	5-18-21	1530

Office Use Only

	Print Name	Signature	Company	Date	Time
Received by			Nu	5/18/21	1545
Analyzed by	Sheliam Pott		Nu	5/20/21	1300
Called by					
Faxed/Email by					

June 10, 2021



Brian Johnson
DH Environmental
1011 SW Klickitat Way Suite 107
Seattle, WA 98134

RE: Bulk Asbestos Fiber Concentration by Point Count
NVL Batch # 2110019

Client Project: POT-Bldg. 326
Location: Tacoma, WA

Dear Mr. Johnson,

At your request, NVL Laboratories conducted analysis of your sample to determine the asbestos concentration using point count procedures.

The sample was analyzed for the presence of asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with U.S. EPA method 600/R-93/116.

Eight slides of thoroughly homogenized material are prepared for any given sample that requires point counting. In order to be counted as a point, the crosshairs of the microscope must center on either a fiber or a particle. The analyst counts at least 50 points per slide preparation. A minimum of 400 non-empty points are counted, then the number of counted asbestos fibers are divided by the total number of points counted to arrive at the percentage of asbestos in the sample.

Please see the conclusion section of the lab reports for point count results.

It has been a pleasure to be of service to you. Please feel free to call if there is anything further we can assist you with.

Sincerely,

Matt Macfarlane, Asbestos Lab Supervisor



Lab Code: 102063-0

Enc.: Sample Results

Phone: 206.547.0100 | Fax: 206.634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



PLM Point Count Bulk Asbestos Fibers Analysis

Client: DH Environmental
Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134
Attention: Mr. Brian Johnson
Project Location: Tacoma, WA

Batch #: 2110019.00
Client Project #: POT-Bldg. 326
Date Received: 6/3/2021
Samples Received: 2
Samples Analyzed: 2
Method: EPA/600R-93/116

Lab ID : 21067030 Client Sample #: POT-KAG-ACM-09 Layer 2

Sample Description: Off-white compacted powdery material with paint. Layer 2 of 3

This sample was initially analyzed for Asbestos content using Polarized Light Microscopy (PLM).
Introduction: Asbestos fibers were observed and quantity was determined using calibrated visual area estimation.
Asbestos content was originally found to be 3 % in Layer 2. Corresponding Lab ID 21060905

Prep Slide #	Asbestos Point	Non Asbestos Point	Total Points Counted
1	3	47	50
2	2	48	50
3	3	47	50
4	3	47	50
5	1	49	50
6	2	48	50
7	1	49	50
8	1	49	50
Total	16	384	400

Conclusion: This Sample Contains 4.0 % ASBESTOS

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Matt Macfarlane

Date: 06/08/2021

Date: 06/10/2021

Matt Macfarlane, Asbestos Lab Supervisor

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.



PLM Point Count Bulk Asbestos Fibers Analysis

Client: DH Environmental
Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134
Attention: Mr. Brian Johnson
Project Location: Tacoma, WA

Batch #: 2110019.00
Client Project #: POT-Bldg. 326
Date Received: 6/3/2021
Samples Received: 2
Samples Analyzed: 2
Method: EPA/600R-93/116

Lab ID : 21067031 Client Sample #: POT-KAG-ACM-10 Layer 5

Sample Description: Off-white compacted powdery material with paint. Layer 5 of 5

This sample was initially analyzed for Asbestos content using Polarized Light Microscopy (PLM).
Introduction: Asbestos fibers were observed and quantity was determined using calibrated visual area estimation.
Asbestos content was originally found to be 3 % in Layer 5 . Corresponding Lab ID 21060906

Prep Slide #	Asbestos Point	Non Asbestos Point	Total Points Counted
1	0	50	50
2	3	47	50
3	3	47	50
4	1	49	50
5	3	47	50
6	2	48	50
7	3	47	50
8	2	48	50
Total	17	383	400

Conclusion: This Sample Contains 4.3 % ASBESTOS

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Matt Macfarlane

Date: 06/08/2021

Date: 06/10/2021

Matt Macfarlane, Asbestos Lab Supervisor

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

ASBESTOS LABORATORY SERVICES



Company DH Environmental
Address 1011 SW Klickitat Way Suite 107
 Seattle, WA 98134
Project Manager Mr. Brian Johnson
Phone (206) 934-4043
NVL Batch Number 2110019.00
TAT 4 Days **AH** No
Rush TAT
Due Date 6/9/2021 **Time** 11:45 AM
Email brian.johnson@dhenviro.com
Fax (206) 930-4043

Project Name/Number: POT-Bldg. 326 **Project Location:** Tacoma, WA

Subcategory PLM Bulk

Item Code ASB-03 EPA 600/R-93-116 Asbestos by PLM (400 points) <bulk>

Total Number of Samples 2

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	21067030	POT-KAG-ACM-09 Layer 2		A
2	21067031	POT-KAG-ACM-10 Layer 5		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Emailed by Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	6/3/21	1145
Analyzed by	Michael Jenkins		NVL	6/8/21	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Samples originally from batch 2108981

Instructions:

Date: 6/4/2021
 Time: 11:08 AM
 Entered By: Kelly AuVu

Kelly Au Vu

From: Brian Johnson <brian.johnson@dhenviro.com>
Sent: Thursday, June 3, 2021 11:41 AM
To: Client Services
Subject: RE: Your completed NVL Final Report document: POT-Bldg 326 Tacoma, WA

Hello,

I would like to proceed with running additional analysis on the sample id's listed below. 4 day turnaround time please. Let me know if you need anything else.

Thanks,
Brian

From: Brian Johnson
Sent: Wednesday, May 26, 2021 9:35 AM
To: Client Services <ClientServices@nvlabs.com>
Subject: RE: Your completed NVL Final Report document: POT-Bldg 326 Tacoma, WA

Thank you, I will let you know shortly what the client decides.

Brian

From: Client Services <ClientServices@nvlabs.com>
Sent: Wednesday, May 26, 2021 9:34 AM
To: Brian Johnson <brian.johnson@dhenviro.com>
Subject: RE: Your completed NVL Final Report document: POT-Bldg 326 Tacoma, WA

Hello,

There is enough material to proceed with a point count.

Thanks & Regards,


Client Services



www.nvlabs.com

Your feedback is very important to us!

ph: 206.547.0100 | fax: 206.634.1936
toll free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North, Seattle, WA 98103

 Please consider the environment before printing this email message.

Disclaimer: This message contains confidential information and is intended only for use by the intended recipients. If you are not the intended recipient, please do not distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version.

From: Brian Johnson <brian.johnson@dhenviro.com>

Sent: Wednesday, May 26, 2021 8:55 AM

To: Client Services <ClientServices@nvllabs.com>

Subject: RE: Your completed NVL Final Report document: POT-Bldg 326 Tacoma, WA

Morning,

Can you please tell me if you have enough remaining sample to run point count (400 points) on the below sample id's?

- POT-KAG-ACM-09 (Layer 2 only)
- POT-KAG-ACM-10 (Layer 5 only)

Brian Johnson, OHST, CIT
EHS Program Manager
DH Environmental, Inc.
Consulting and Field Services



Email: brian.johnson@dhenviro.com

Phone: 206.930.4043

www.dhenviro.com

CONFIDENTIALITY NOTICE: This email communication contains private, confidential, or legally privileged information intended for the sole use of the designated and/or duly authorized recipient(s). If you are not the intended recipient or have received this email in error, please notify the sender immediately by email and permanently delete all copies of this email including all attachments without reading them. If you are the intended recipient, secure the contents in a manner that conforms to all applicable state and/or federal requirements related to privacy and confidentiality of such information.

From: clientservices@nvllabs.com <clientservices@nvllabs.com>

Sent: Tuesday, May 25, 2021 2:50 PM

To: Brian Johnson <brian.johnson@dhenviro.com>

Subject: Your completed NVL Final Report document: POT-Bldg 326 Tacoma, WA

Your requested analysis is complete, please see the attached document:

Client Job Number: POT-Bldg. 326
NVL Labs Batch ID: 2109018
Company Name: DH Environmental
Project Location: Tacoma, WA
Date: 5/20/2021

Thank you for choosing NVL Labs, we appreciate your business!

June 24, 2021



Brian Johnson
DH Environmental
1011 SW Klickitat Way Suite 107
Seattle, WA 98134

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2111003.00

Client Project: POT-Bldg. 326
Location: 2302 Ross Way Tacoma, WA

Dear Mr. Johnson,

Enclosed please find test results for the 7 sample(s) submitted to our laboratory for analysis on 6/18/2021.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with **U. S. EPA 40 CFR Appendix E to Subpart E of Part 763**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116**, Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Macfarlane'.

Matt Macfarlane, Asbestos Lab Supervisor



The logo for NVLAP (National Voluntary Laboratory Accreditation Program). It consists of the letters 'NVLAP' in a stylized, outlined font.

Lab Code: 102063-0

Enc.: Sample Results

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental

Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson

Project Location: 2302 Ross Way Tacoma, WA

Batch #: 2111003.00

Client Project #: POT-Bldg. 326

Date Received: 6/18/2021

Samples Received: 7

Samples Analyzed: 7

Method: EPA/600/R-93/116

Lab ID: 21073795 **Client Sample #: POT-Bldg.326-061821-ACM-01**

Location: 2302 Ross Way Tacoma, WA

Layer 1 of 3	Description: White compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 2 of 3	Description: Off-white compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 3 of 3	Description: White chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Gypsum/Binder, Fine particles	Cellulose 34%	

Chrysotile 3%

Lab ID: 21073796 **Client Sample #: POT-Bldg.326-061821-ACM-02**

Location: 2302 Ross Way Tacoma, WA

Layer 1 of 3	Description: White compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 2 of 3	Description: Off-white compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 3 of 3	Description: White chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Gypsum/Binder, Fine particles	Cellulose 35%	

Chrysotile 3%

Lab ID: 21073797 **Client Sample #: POT-Bldg.326-061821-ACM-03**

Location: 2302 Ross Way Tacoma, WA

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Matt Macfarlane

Date: 06/22/2021

Date: 06/24/2021

Matt Macfarlane, Asbestos Lab Supervisor

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental

Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson

Project Location: 2302 Ross Way Tacoma, WA

Batch #: 2111003.00

Client Project #: POT-Bldg. 326

Date Received: 6/18/2021

Samples Received: 7

Samples Analyzed: 7

Method: EPA/600/R-93/116

Layer 1 of 3	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 3	Description: Off-white compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	None Detected ND		Chrysotile 4%
Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine particles, Debris	Cellulose 34%		None Detected ND
		Synthetic fibers 4%		

Lab ID: 21073798 **Client Sample #: POT-Bldg.326-061821-ACM-04**

Location: 2302 Ross Way Tacoma, WA

Layer 1 of 3	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 3	Description: Off-white compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	None Detected ND		Chrysotile 4%
Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine particles, Debris	Cellulose 33%		None Detected ND

Lab ID: 21073799 **Client Sample #: POT-Bldg.326-061821-ACM-05**

Location: 2302 Ross Way Tacoma, WA

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Matt Macfarlane

Date: 06/22/2021

Date: 06/24/2021


Matt Macfarlane, Asbestos Lab Supervisor

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental

Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson

Project Location: 2302 Ross Way Tacoma, WA

Batch #: 2111003.00

Client Project #: POT-Bldg. 326

Date Received: 6/18/2021

Samples Received: 7

Samples Analyzed: 7

Method: EPA/600/R-93/116

Layer 1 of 3	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 3	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	Cellulose 3%		None Detected ND
Layer 3 of 3	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine particles, Debris	Cellulose 35%		None Detected ND

Lab ID: 21073800 **Client Sample #: POT-Bldg.326-061821-ACM-06**

Location: 2302 Ross Way Tacoma, WA

Layer 1 of 4	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	None Detected ND		None Detected ND
Layer 2 of 4	Description: White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	Synthetic fibers 6%		None Detected ND
Layer 3 of 4	Description: Off-white compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Paint, Calcareous binder, Calcareous particles	None Detected ND		Chrysotile 3%
Layer 4 of 4	Description: White chalky material with paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Gypsum/Binder, Fine particles, Debris	Cellulose 34%		None Detected ND

Lab ID: 21073801 **Client Sample #: POT-Bldg.326-061821-ACM-07**

Location: 2302 Ross Way Tacoma, WA

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Matt Macfarlane

Date: 06/22/2021

Date: 06/24/2021


Matt Macfarlane, Asbestos Lab Supervisor

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: DH Environmental

Address: 1011 SW Klickitat Way Suite 107
Seattle, WA 98134

Attention: Mr. Brian Johnson

Project Location: 2302 Ross Way Tacoma, WA

Batch #: 2111003.00

Client Project #: POT-Bldg. 326

Date Received: 6/18/2021

Samples Received: 7

Samples Analyzed: 7

Method: EPA/600/R-93/116

Layer 1 of 2	Description: White compacted powdery material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Paint, Calcareous binder, Calcareous particles	None Detected ND	
Layer 2 of 2	Description: White chalky material with paper	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
		Gypsum/Binder, Fine particles, Wood flakes	Cellulose 35%	
			Wood fibers 10%	

Sampled by: Client

Analyzed by: Michael Jenkins

Reviewed by: Matt Macfarlane

Date: 06/22/2021

Date: 06/24/2021


Matt Macfarlane, Asbestos Lab Supervisor

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

ASBESTOS LABORATORY SERVICES



Company DH Environmental
Address 1011 SW Klickitat Way Suite 107
 Seattle, WA 98134
Project Manager Mr. Brian Johnson
Phone (206) 934-4043
NVL Batch Number 2111003.00
TAT 3 Days **AH** No
Rush TAT
Due Date 6/23/2021 **Time** 1:30 PM
Email brian.johnson@dhenviro.com
Fax (206) 930-4043

Project Name/Number: POT-Bldg. 326 **Project Location:** 2302 Ross Way Tacoma, WA

Subcategory PLM Bulk

Item Code ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 7

Rush Samples

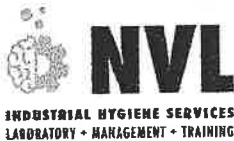
	Lab ID	Sample ID	Description	A/R
1	21073795	POT-Bldg.326-061821-ACM-01		A
2	21073796	POT-Bldg.326-061821-ACM-02		A
3	21073797	POT-Bldg.326-061821-ACM-03		A
4	21073798	POT-Bldg.326-061821-ACM-04		A
5	21073799	POT-Bldg.326-061821-ACM-05		A
6	21073800	POT-Bldg.326-061821-ACM-06		A
7	21073801	POT-Bldg.326-061821-ACM-07		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Drop Box				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Michael Jenkins		NVL	6/18/21	1330
Analyzed by	Michael Jenkins		NVL	6/22/21	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions:

Date: 6/18/2021
 Time: 2:57 PM
 Entered By: Fatima Khan



ASBESTOS CHAIN OF CUSTODY

2111003

Turn An

- | | | |
|----------------------------------|--|----------------------------------|
| <input type="checkbox"/> 1 Hour | <input type="checkbox"/> 24 Hours | <input type="checkbox"/> 4 Days |
| <input type="checkbox"/> 2 Hours | <input type="checkbox"/> 2 Days | <input type="checkbox"/> 5 Days |
| <input type="checkbox"/> 4 Hours | <input checked="" type="checkbox"/> 3 Days | <input type="checkbox"/> 10 Days |

Please call for TAT less than 24 Hours

Company DH Environmental, Inc.
Address 1011 SW Klickitat Way Suite 107
Seattle, WA 98134
Phone _____

Project Manager Brian Johnson
Cell (206) 930-4043
Email brian.johnson@dhenviro.com
Fax () -

Project Name/Number <u>POT-Bldg 326</u>	Project Location <u>2302 Ross Way Tacoma, WA</u>
<input type="checkbox"/> PCM Air (NIOSH 7400) <input type="checkbox"/> TEM (NIOSH 7402) <input type="checkbox"/> TEM (AHERA) <input type="checkbox"/> TEM (EPA Level II Modified)	
<input checked="" type="checkbox"/> PLM (EPA 600/R-93-116) <input type="checkbox"/> EPA 400 Points (600/R-93-116) <input type="checkbox"/> EPA 1000 Points (600/R-93-116)	
<input type="checkbox"/> PLM Gravimetry (600/R-93-116) <input type="checkbox"/> Asbestos in Vermiculite (EPA 600/R-04/004) <input type="checkbox"/> Asbestos in Sediment (EPA 1900 Points)	
<input type="checkbox"/> Asbestos Friable/Non-Friable (EPA 600/R-93/116) <input type="checkbox"/> Other _____	

Reporting Instructions Please send results to Brian Johnson

☐ Call () ☐ Fax () ☒ Email brian.johnson@dhenviro.com

Total Number of Samples 7

Sample ID	Description	A/R
1	POT-Bldg 326-061821-ACM-01	
2	POT-Bldg 326-061821-ACM-02	
3	POT-Bldg 326-061821-ACM-03	
4	POT-Bldg 326-061821-ACM-04	
5	POT-Bldg 326-061821-ACM-05	
6	POT-Bldg 326-061821-ACM-06	
7	POT-Bldg 326-061821-ACM-07	
8		
9		
10		
11		
12		
13		
14		
15		

	Print Name	Signature	Company	Date	Time
Sampled by	Brian Johnson		DH Environmental	06/18/2021	1030
Relinquish by	Brian Johnson		DH Environmental	06/18/2021	1315

Office Use Only

	Print Name	Signature	Company	Date	Time
Received by				6/18/21	1330
Analyzed by					
Called by					
Faxed/Email by					

Attachment 3 Laboratory Certifications

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 102063-0

NVL Laboratories, Inc.
Seattle, WA

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2020-07-23 through 2021-09-30

Effective Dates

A handwritten signature in blue ink, reading "Dana S. Laman".

For the National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

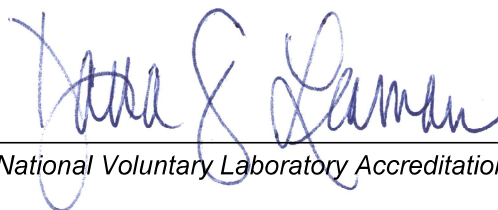
NVL Laboratories, Inc.
4708 Aurora Avenue N.
Seattle, WA 98103
Mr. Nghiep Vi Ly
Phone: 206-547-0100 Fax: 206-634-1936
Email: nick.l@nvlabs.com
<http://www.nvlabs.com>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 102063-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials



For the National Voluntary Laboratory Accreditation Program

The State of
Department



Washington
of Ecology

NVL Laboratories, Inc
Seattle, WA

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation.

This certificate is effective July 18, 2020 and shall expire July 17, 2021.

Witnessed under my hand on July 14, 2020.

Rebecca Wood
Lab Accreditation Unit Supervisor

Laboratory ID
C797

WASHINGTON STATE DEPARTMENT OF ECOLOGY

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

SCOPE OF ACCREDITATION

NVL Laboratories, Inc

Seattle, WA

is accredited for the analytes listed below using the methods indicated. Full accreditation is granted unless stated otherwise in a note. EPA is the U.S. Environmental Protection Agency. SM is "Standard Methods for the Examination of Water and Wastewater." SM refers to EPA approved method versions. ASTM is the American Society for Testing and Materials. USGS is the U.S. Geological Survey. AOAC is the Association of Official Analytical Chemists. Other references are described in notes.

Matrix/Analyte	Method	Notes
Drinking Water		
Copper	EPA 200.9 Rev 2.2 (1994)	
Lead	EPA 200.9 Rev 2.2 (1994)	
Solid and Chemical Materials		
Arsenic	EPA 6010D_(7/14)	
Barium	EPA 6010D_(7/14)	
Cadmium	EPA 6010D_(7/14)	
Chromium	EPA 6010D_(7/14)	
Copper	EPA 6010D_(7/14)	
Lead	EPA 6010D_(7/14)	
Nickel	EPA 6010D_(7/14)	
Selenium	EPA 6010D_(7/14)	
Silver	EPA 6010D_(7/14)	
Zinc	EPA 6010D_(7/14)	
Mercury	EPA 7471B_(1/98)	
Aroclor-1016 (PCB-1016)	EPA 8082A_(2/07)	
Aroclor-1221 (PCB-1221)	EPA 8082A_(2/07)	
Aroclor-1232 (PCB-1232)	EPA 8082A_(2/07)	
Aroclor-1242 (PCB-1242)	EPA 8082A_(2/07)	
Aroclor-1248 (PCB-1248)	EPA 8082A_(2/07)	
Aroclor-1254 (PCB-1254)	EPA 8082A_(2/07)	
Aroclor-1260 (PCB-1260)	EPA 8082A_(2/07)	
Asbestos	EPA 600/R-93-116	1

Matrix/Analyte

Method

Notes

Accredited Parameter Note Detail

(1) Accreditation based in part on recognition of US Department of Commerce NIST NVLAP accreditation.



07/14/2020

Authentication Signature

Date

Rebecca Wood, Lab Accreditation Unit Supervisor

Attachment 4 Inspector Certifications

THE ASBESTOS INSTITUTE

Certifies that

Brian Johnson

has attended and received instruction in the EPA approved course

AHERA Building Inspector Refresher

on

July 07, 2020

and successfully completed and passed the competency exam.

Certificate:
ON-4644-2900-070720

Date of Examination:
7-Jul-2020

Date of Expiration:
07-Jul-2021



William T. Cavness
Director



Approved Instructor

THE ASBESTOS INSTITUTE

20033 N. 19th Ave, Building 6, Phoenix, AZ 85027
602-864-6564 – www.theasbestosinstitute.com

This training meets all requirements for asbestos certification under Toxic Substance Control Act Title II.

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Abatement Program

Brian Gary Johnson

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Risk Assessor*

Certification #

7170

Issuance Date

02/23/2021

Expiration Date

03/27/2024

PART 1 - GENERAL

1.01 SUMMARY

- A. Work in this section includes:
 - 1. Wood framing where rough openings are added or modified.
 - 2. Wood blocking at roof eaves and raised roof curbs.
 - 3. Wood sheathing used to replace or infill existing construction.

1.02 SUBMITTALS

- A. Product Data: For each type or product indicated.
 - 1. Treated roof blocking Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that materials comply with requirements.
 - 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to the project site.
 - 3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
 - 4. Fasteners, including base metal and coatings.
 - 5. Lumber data, indicating species and grade.

1.03 PRODUCT STORAGE AND DELIVERY

- A. Keep material dry at all times. Protect against exposure to weather and contact with damp or wet surfaces.
- B. Stack lumber, plywood, and other panels. Place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.01 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. For exposed lumber indicated to receive stained or natural finish, mark grade stamp on end or back of each piece.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
 - 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
- B. Wood Structural Panels:
 - 1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
 - 2. Factory mark panels according to indicated standard.

2.02 WOOD-PRESERVATIVE TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPAC2 (lumber) and AWPAC9 (plywood).

1. Preservative Chemicals: Do not use treatment containing CCA (chromated copper arsenate) or ammoniacal copper zinc arsenate (ACZA). Acceptable treatments:
 2. Ammoniacal, or amine, copper quat (ACQ).
 3. Copper bis (dimethyldithiocarbamate) (CDDC).
 4. Ammoniacal copper citrate (CC).
 5. Copper azole, Type A (CBA-A).
- B. For lumber that is not in contact with the ground and is continuously protected from liquid water, treat according to AWPAC31 with inorganic boron (SBX). Provide treating solution of greater than 98% purity, on an anhydrous basis (AWPA P5).
1. Acceptable Preservative Chemicals: Sodium octaborate, sodium tetraborate, sodium pentaborate, and boric acid.
- C. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
- D. Mark each treated item with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- E. Application: Treat items indicated on Drawings, and the following:
1. Wood nailers, curbs, equipment support bases, blocking, and similar members in connection with roofing or in contact with masonry.
 2. Wood framing members less than 18 inches above grade.

2.03 DIMENSION LUMBER

- A. General: Of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.
- B. Exterior Framing: Construction, or No. 2 grade and any of the following species:
1. Mixed southern pine; SPIB
 2. Eastern softwoods; NELMA
 3. Northern species; NLGA
 4. Western woods; WCLIB or WWPA

2.04 MISCELLANEOUS LUMBER

- A. Provide miscellaneous lumber for support or attachment of other construction, including the following:
1. Rooftop equipment bases and support curbs.
 2. Blocking.
 3. Nailers.
 4. Furring.
 5. Grounds.
- B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 19 percent maximum moisture content of any species.

- C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
 - 1. Mixed southern pine, No. 2 grade; SPIB.
 - 2. Eastern softwoods, No. 2 Common grade; NELMA.
 - 3. Northern species, No. 2 Common grade; NLGA.
 - 4. Western woods, Construction or No. 2 Common grade; WCLIB or WWPA.

2.05 PLYWOOD:

- A. Plywood Wall and Roof Sheathing: Exposure 1 sheathing.
 - 1. Span Rating: No greater than 16/0 O.C.
- B. Replacement sheathing at perimeter of existing soffits: DOC PS 1, Exposure 1 (CDX), C-D Plugged, fire-retardant treated, in thickness, not less than 3/4" inches thick. Comply with Product Standard PS-1.

2.06 MISCELLANEOUS MATERIALS

- A. Fasteners:
 - 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
 - 2. Power-Driven Fasteners: CABO NER-272.
 - 3. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- B. Metal Framing Anchors: Made from hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.
 - 1. Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.
 - 2. Allowable Design Loads: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Apply field treatment complying with AWP A M4 to cut surfaces of preservative- treated lumber and plywood.
- C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.

2. Published requirements of metal framing anchor manufacturer.
 3. Table R602.3(1), Fastener Schedule for Structural Members, and Table R602.3(2), Alternate Attachments, in 2012 IRC's International Residential Code for One- and Two-Family Dwellings.
- D. Framing Standard: Comply with the American Forest & Paper Association's National Design Specifications for Wood Construction.
- E. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Set headers on edge and support on jamb studs.
1. For load-bearing walls, provide double-jamb studs for openings 72 inches and less in width, and triple-jamb studs for wider openings. Provide headers of depth according to Tables R502.5(1) and R502.5(2) in the 2012 IRC's International Residential Code for One- and Two-Family Dwellings.
- F. Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.
- G. Coordinate with the Engineer for removal of existing ductwork prior to modifying rough openings at wall louvers.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Work in this section includes:
 - 1. New weather barrier membrane installed at metal wall panel assemblies.
 - 2. Self-adhered membrane flashing at rough openings and copings.

1.02 DEFINITIONS

- A. This section includes the following items identified in the drawings as:
 - 1. WRB - Sheet weather barrier used in rainscreen siding assemblies.
 - 2. SAM - Self-adhered membrane flashing used at transitions and terminations.
 - 3. FFSAM - Foil-faced self-adhered membrane used at rough openings.
 - 4. HTSAM - High-temp self-adhered membrane flashings.

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, and installation requirements.
- B. Shop Drawings: Indicate the type and location of different weather barrier products and components to be used.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Engineer may engage a third-party consultant to inspect and observe installation of weather barriers and other items critical to the ongoing integrity building envelope.

1.05 FIELD CONDITIONS

- A. Environmental Limitations: Apply weather barrier materials within range of ambient and substrate temperatures recommended by weather barrier manufacturer.
- B. Protect substrates from environmental conditions that affect material performance.
- C. Contractor shall provide all necessary means of temporary weather protection during installation of weather barriers.
- D. Do not apply weather barrier materials onto damp or wet substrates, or during snow, rain, fog, or other adverse weather events.
- E. Do not install self-adhered membranes when ambient temperatures are at or below 41° F for 24 hours before application. Minimum temperature for installation of primer is 41° F.
- F. If water penetrates the membrane due to inadequate production, contractor shall cut membranes to inspect damage and replace all damaged material to eliminate all traces of water within the assembly.
- G. Do not allow membranes to remain exposed longer than 3 weeks.

PART 2 - PRODUCTS

2.01 WEATHER BARRIER (WRB):

- A. Self-adhered, vapor permeable weather and air-barrier sheet installed at new metal panels.
- B. Acceptable Manufacturer/Product:
 - 1. Henry Company - "Blueskin VP160"
 - 2. Grace Construction Products – "Perm-A-Barrier VPS"
 - 3. VaproShield - "WrapShield SA Self-Adhered"
 - 4. Or approved equal.
- C. Primers: Provide manufacturer's low-VOC primer as necessary for full adhesion over existing plywood substrates.

2.02 SELF-ADHERED MEMBRANE FLASHING (SAM):

- A. Self-adhered membrane flashing used at locations noted as "SAM" in the drawings.
 - 1. Acceptable Manufacturer/Product:
 - a. Henry Company - "Blueskin SA"
 - b. Grace Construction Products – "Vycor V40"
 - c. VaproShield - "WrapFlashing SA Self-Adhered"
 - d. Or approved equal.
 - 2. Performance Characteristics:
 - a. Rubberized SBS
 - b. Thickness: 40mil minimum
 - c. 6", 9", 12", or 18" width as required for application
- B. Primers: Provide manufacturer's low-VOC primer as necessary for full adhesion.

2.03 FOIL-FACED SELF-ADHERED MEMBRANE FLASHING (FFSAM):

- A. For use at rough openings and other locations that integrate with a sealant joint.
 - 1. Acceptable Manufacturer/Product:
 - a. Henry Company – "Blueskin Metal Clad"
 - b. Grace Construction Products – "Vycor Aluminum Flashing"
 - c. VaproShield – "Vapro-SS Flashing"
 - d. Or approved equal.
 - 2. Performance Characteristics
 - a. Rubberized SBS with aluminum or stainless steel facing.
 - b. Thickness: 40mil minimum
 - c. 6", 9", 12", or 18" width as required for application
- B. Primers: Provide manufacturer's low-VOC primer as necessary for full adhesion.

2.04 HIGH TEMPERATURE, SELF-ADHERED MEMBRANE FLASHING (HTSAM):

- A. High-temp self-adhered membrane used beneath metal copings and other conditions noted as "HTSAM" in the drawings.
 - 1. Acceptable Manufacturer/Product:
 - a. Henry Company – "Blueskin PE200HT"
 - b. Grace Construction Products – "Ice & Water Shield HT"
 - c. Soprema – "Lastobond Shield HT"
 - d. Or approved equal.
 - 2. Performance Characteristics:
 - a. Rubberized SBS suitable for use in high-temperature locations.
 - b. Thickness: 40mil minimum
 - c. 18" or 36" widths as required for application.
- B. Primers: Provide manufacturer's low-VOC primer as necessary for full adhesion.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Verify that substrates are sound and free of oil, grease, dirt, excess mortar, or other contaminants.
- C. Verify items that penetrate sheathing surfaces are securely installed prior to membrane application.

3.02 PREPARATION

- A. Clean, prepare, and treat substrate according to manufacturer's written instructions. Provide clean, dust-free, dry substrate for self-adhered sheet flashing application.
- B. Ensure substrate is continuous, and provide solid backing as required. Unsupported membrane greater than 1/4 inch is unacceptable.
- C. Round off sharp metal flashing edges to prevent puncture of self-adhered membrane and underlayment.

3.03 INSTALLATION

- A. General: Install self-adhered sheet flashings and accessory materials according to manufacturer's written instructions, recommendations, and technical bulletins.
- B. Apply manufacturer's primer to substrates at required rate, per manufacturer's recommendations. Allow primers to dry or "tack" prior to application of membrane. Limit priming to areas that will be covered by air-barrier sheet on same day. Re-prime areas exposed for more than 4 hours or if contaminated by dust or debris.
- C. Underlayment Installation: Remove and dispose of release paper layer. Roll onto substrate with a mechanical roller to encourage full contact bond. Use heat gun as required to achieve adequate continuous bond.

- D. Lap each sheet or strip in a water-shedding manner with upper sheets overlapping lower sheets in a horizontal fashion. Horizontal laps to be a minimum of 6 inches. Vertical laps to be no less than 3 inches.
- E. All laps to be shingle laps unless explicitly detailed otherwise in the drawings. Seal exposed membrane edges with continuous bead of mastic or silicone sealant.
- F. Inspect finished installation and repair any punctures, voids, and deficient lapped seams in self-adhered membranes. Slit and flatten any "fishmouths" and blisters.

END OF SECTION

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions, Division-1 Specifications sections, and Engineer's Special Conditions apply to work of this section.

1.02 WORK IN OTHER SECTIONS

- A. Aluminum Entrances and Storefronts, Section 08 40 00
- B. Joint Sealer, Section 07 92 00

1.03 DESCRIPTION OF WORK

- A. Extent of each type of flashing and sheet metal work is indicated on drawings and by provisions of this section and includes sheet metal flashing and trim work in the following categories:
- B. New sheet metal shall be as follows unless noted otherwise:
 - 1. Factory-finished (or coil-coated), galvanized (noted as "FF" on drawings)
 - 2. Straight run standing-seam copings
 - a. Fascia metal and counterflashings
 - b. Flashing skirts
 - c. Curb flashings
 - 3. Shop-fabricated, galvanized steel soldered assemblies: Prime and coat to match factory finished material (noted "SF" on drawings)
 - a. Coping terminations
 - b. Joint covers
 - c. Corner flashings
 - 4. Galvanized Steel
 - a. Non exposed-to-view cleats and hooks
 - 5. Stainless Steel
 - a. Rain skirt flashing
 - b. Reglets and reglet counter flashings
 - c. Overflow scuppers

1.04 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Include the following:
 - 1. Identify material, thickness, weight, and finish for each item and location in Project.
 - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.

3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.

1.05 STANDARD SPECIFICATIONS

- A. Conform to recommendations of "Architectural Sheet Metal Manual", latest edition issued by Sheet Metal and Air conditioning Contractor's National Association (SMACNA) insofar as applicable for all metals.
- B. Fabricate and install flashings at roof edges to comply with SEI/ASCE 7.

1.06 ELECTROLYTIC AND CORROSIVE ACTION

- A. Protect adjacent dissimilar metals from electrolytic action by adequate coating. Coat exterior masonry, plates and concrete surfaces against which sheet metal work is applied with suitable paint, red rosin paper or polyethylene underlayment.

1.07 DIMENSIONS

- A. Verify dimensions on job; correlate with adjoining work.

1.08 WARRANTY PROVISIONS

- A. Sheet Metal Finish Warranty: industry standard warrantee for Kynar coated metals; 20 years from the date of Substantial Completion.
 1. For fading, chalking and other coating defects
- B. Installer's Warranty: two years from the Date of Substantial Completion. Warranty covers leak issues associated with installation issues.
- C. All warranties to reference the project; warranty start date; signed and dated by an officer of the issuing firm.

PART 2 - PRODUCTS

2.01 FLASHING AND SHEET METAL MATERIALS

- A. Concealed hook strips, fasteners, etc.: Same metal as material being fastened
 1. 20 gage galvanized steel except as otherwise indicated.
- B. Galvanized Steel: Commercial quality with 0.20 percent copper, ASTM A 526 except ASTM A 527 for lock-forming, G90 hot-dip galvanized, mill phosphatized where indicated for painting; 24 gage except as otherwise indicated.
 1. Finish requirements for shop-fabricated, soldered assemblies:
 - a. Clean galvanized surfaces with non-petroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
 - b. Acrylic-Enamel Finish: Two finish coats over a primer.
 - 1) Primer: Galvanized metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils (0.031 mm).
 - 2) First and Second Coats: acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils (0.066)

- 3) Color: match factory finish coating
- C. Factory Finished Galvanized Steel: factory-primed, galvanized steel with the following finish coating:
 - 1. Fluoropolymer Coating: "Kynar 500" 70% resin finish coat baked-on for 15 minutes at 450 degrees F (232 degrees C), over 0.2 mil baked-on epoxy primer for a total film thickness of mils, 30% reflective gloss (ASTM D 523).
 - 2. Durability: Provide coating which has been field tested under normal range of weathering conditions for minimum of 20 years without significant peel, blister, flake, chip, crack or check in finish, and without chalking in excess of 8 (ASTM D 659), and without fading in excess of 5 NBS units.
 - 3. Color:
 - 4. Flashings at window openings: match storefront frame
- D. Stainless Steel: AISI Type 302/304, complying with ASTM A 167, 2D annealed finish, soft, except where harder temper required for forming or performance; 0.0187-inch thick (26 gage) except as otherwise indicated.

2.02 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Screw and Nail Type Fasteners - General: Same metal as flashing/sheet metal or other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
- B. Fasteners for Concrete & Masonry: "Zamac Nailin" by Rawl with stainless steel nail and separate neoprene gasketed stainless steel washer or Rawl Hex Head Rawl stainless steel "Tapper" with separate neoprene gasketed stainless steel washer.
 - 1. Fastener for plywood to concrete or CMU: Mushroom head spike, 1/2" x 3 1/4".
- C. Gasketed Fasteners: #10 x 1 1/2 painted head hex head screws with separate neoprene gasketed stainless steel washers.
- D. Rivets: Stainless steel closed end pop-rivets, length as required.
- E. Bituminous Coating: FS TT-C-494 or SSPC - Paint 12, solvent type bituminous mastic, nominally free of sulfur, compounded for 15-mil dry film thickness per coat.
- F. Roofing Cement: ASTM D-4586 asphaltic, asbestos free for stripping plies.
- G. Provide all miscellaneous items as required for a complete and proper installation.
- H. Sealant Tape: Tremco MBT-35 Metal Building Tape or butyl tape to meet TT-C-1796-A or approved equivalent.
- I. Separation Tape: 1/16" x 1/2" neoprene tape.
- J. Solder: For use with stainless steel & galvanized steel, provide tin solder (ASTM B 32), with rosin flux.
- K. Stainless steel pipe clamp: 1" snap lock, swivel action.
- L. Reglets: surface mounted, two-piece fabricated from 20 gauge galvanized steel

2.03 FABRICATED UNITS

- A. General Metal Fabrication: Shop-fabricated work to greatest extent possible. Comply with details shown, and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance; with expansion provisions for running work, sufficient to permanently prevent leakage, damage or deterioration of the work. Fabricate sheet metal to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed sheet metal work in 10' lengths without excessive oil-canning, buckling and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.
- B. Expansion Provisions: Provide for thermal expansion of exposed sheet metal work. Space movement joints at maximum 10 feet intervals with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion joints as detailed cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic (concealed within joints).
- C. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Prein edges of sheets to be soldered to a width of 1 1/2 inches, except where pretinned surfaces would show in finished work.
- D. Sealant Joints: Where moveable non-expansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of urethane sealant in compliance with SMACNA standards.
- E. Preparation for Shop Priming: Prepare surfaces of soldered galvanized steel fabrications to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure on installed metal fabrications.
 - 1. Exterior SSPC-SP1 "Solvent Cleaning"
- F. Apply shop primer to surfaces of metal fabrications, unless otherwise indicated. Comply with requirements of SSPC-PA1 "Paint Application Specification No.1" for shop painting.

2.04 SHEET METAL FABRICATIONS

- A. General: Fabricate sheet metal items in thickness or weight needed to comply with performance requirements but not less than listed below for each application and metal.
 - 1. All exposed-to-view stainless steel on curved roof to be fabricated from colored stainless steel
- B. Roof-Drain Flashing: Fabricated from the following material:
 - 1. Lead: 4.0 lb/sq. ft. (1.6 mm) thick, hard tempered.
 - 2. Liquid flashings
- C. Exposed Trim, Gravel Stops, Fascia: Fabricated from the following material:
 - 1. Coil Coated Galvanized sheet steel: 24 gauge.
- D. Counterflashing: Fabricated from the following material:
 - 1. Coil Coated Galvanized sheet steel: 24 gauge.
- E. Flashing Receivers: Fabricated from the following material:
 - 1. Coil Coated Galvanized sheet steel: 24 gauge.
- F. Drip Edges: Fabricated from the following material:

1. Coil Coated Galvanized sheet steel: 24 gauge
- G. Eave Flashing: Fabricated from the following material:
 1. Coil Coated Galvanized sheet steel: 24 gauge.
- H. Roof-Penetrating Flashing: Fabricated from the following material:
 1. Lead: 4.0 lb./sq. ft. (1.6 mm) thick, hard tempered.
- I. Non-exposed cleats, clips, closures and hooks: Fabricated from the following material:
 1. Galvanized steel, 20 gauge.
- J. Flashing Skirts: Fabricated from the following material:
 1. Coil Coated Galvanized sheet steel: 24 gauge

2.05 SILL PANS, TRANSITION FLASHING AND SCUPPERS : FABRICATED FROM THE FOLLOWING MATERIAL:

- A. Stainless steel: 0.0187 inch (0.5 mm) thick.
- B. Solder corners water-tight.

PART 3 - EXECUTION

3.01 INSTALLATION REQUIREMENTS

- A. General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations, and with SMACNA "Architectural Sheet Metal Manual". Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units, conceal fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams, laid away from southerly prevailing weather, which will be permanently watertight and weatherproof.
- B. Roof Penetration Flashing: Bed primed flanges of work in a uniform coat of bituminous roofing cement where required for embedment in membrane and waterproof performance. Coordinate with roofing installation per Section 07510.
- C. Roof coping terminations, fabrications, curb flashings, and other sheet metal work where indicated: Fabricate sheet metal work of galvanized steel as detailed. All joints and connections shall be soldered for strong and watertight joints.
- D. Counterflashings: Coordinate installation of counterflashing with installation of assemblies to be protected by counterflashings. Install counterflashings in reglets or receivers. Secure in a watertight manner by means of snap-in installation and sealant, blind rivets and sealant, reglets with sealant and face pins.
- E. Wall counter flashings, fascia flashings and other straight run sheet metal work where indicated: Fabricate from factory-primed galvanized steel.
- F. Counter flashings: Form to details as indicated. Flat locked seams; lap ends 4-inch minimum with bayonet joints per details, seal with urethane sealant, hem and crimp bottom edge. Install upper edges of flashing in existing reglet as indicated by details or as surface-applied installation per details.
- G. Curb Flashings: Shop fabricate to shapes and profiles indicated.
- H. Plywood: attach with mushroom head spikes, counter sink heads.

3.02 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces, removing substances which might cause corrosion of metal or deterioration of finishes, and promptly apply match touch-up paint to surface scratches and cut "raw" edges prior to exposure to weather. Installer shall advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction, to ensure that work will be without damage or deterioration, other than natural weathering, at time of substantial completion.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General, Supplementary and Special Conditions and Division-1 Specification sections, apply to work of this section.

1.02 SUMMARY

- A. Extent of each type of sealant work is indicated on drawings and by provisions of this section.
- B. This section includes sealants for the following applications
 - 1. Exterior joints: in the following vertical surfaces and non-traffic horizontal surfaces:
 - 2. Joints between different materials.
 - 3. Other joints as indicated.
- C. Related Sections include the following
 - 1. Section 07 62 00 - Sheet Metal Flashing for sealing joints related to flashing and sheet metal for roofing.

1.03 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seal without causing staining or deterioration of joint substrates.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original unopened containers or bundles with labels informing about manufacturer, project name and designation, color, expiration period for use, pot life, curing time and mixing instructions for multi-component materials.
- B. Store and handle materials to prevent their deterioration or damage due to moisture, temperature change, contaminants, or other causes.

1.05 SUBMITTALS

- A. General: Submit in accordance with Section 01 33 00.
- B. Product data from manufacturers for each joint sealant required.
- C. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.
- D. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has completed joint sealant application similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.
- B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

1.07 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers. Or below 40 deg F (4.4 deg C)
 - 2. When joint substrates are wet due to rain, frost, condensation, or other causes
- B. Joint Width Conditions: Do not proceed with installation of joint sealers when joint widths are less than allowed by joint sealer manufacturer for application indicated.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.08 WARRANTY

- A. Installer's warranty: Written warranty, signed by installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within the specified warranty period.
 - 1. Warranty period: 2 years from the date of substantial completion
- B. Manufacturer's warranty: Written warranty, signed by elastomeric sealant manufacturer agreeing to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty period: 10 years from the date of Substantial Completion

PART 2 – PRODUCTS

2.01 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by testing and field experience.
- B. Colors: Provide selection made by Architect from manufacturer's standard colors for products of type indicated.

2.02 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant which complies with ASTM C 920 requirements, including those for Type, Grade, Class, and intended uses indicated in the 'Joint Sealant Schedule' located at end of this section.
- B. Available Products: Subject to compliance with requirements, elastomeric sealants that may be incorporated in the Work include, but are not limited to, the products specified in the "Joint Sealant Schedule" located at the end of this section.

2.03 JOINT SEALANT BACKING:

- A. General: Provide sealant backings of material and type which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Plastic Foam Backer Rod: Preformed, compressible, resilient, non-staining, non waxing, non extruding strips of flexible plastic foam of material indicated below and of size and shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

- C. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, non-out-gassing in unruptured state and with diameter 40% greater than the joint width.
- D. Bond Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back or joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.04 MISCELLANEOUS MATERIALS

- A. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint sealer substrate and field tests.
- B. Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaner of type acceptable to manufacturer of sealant and sealant backing materials which are not harmful to substrates and adjacent nonporous materials.
- C. Masking Tape: Provide non-staining, non-absorbent type compatible with joint sealants and to surfaces adjacent to joints as applicable.
- D. Accessory Materials for Fire-Stopping Sealants: Provide forming, joint fillers, packing and other accessory materials for installation of fire-stopping sealants as applicable to installation conditions indicated.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Require installer to inspect joints indicated to receive joint sealers for compliance with requirements for joint configurations, installation tolerances and other conditions affecting joint sealer performance.
- B. Do not allow joint sealer to proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
- B. Remove all foreign material from joint substrates which could interfere with adhesion and cohesion of joint sealer, including dust; paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; oil; grease; waterproofing; water repellents; water; surface dirt and frost.
- C. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
- D. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile; and other non-porous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- E. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on pre-construction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primer to areas of joint sealer bond; do not allow spillage or migration onto adjoining surfaces.

- F. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing seal.

3.03 INSTALLATION OF JOINT SEALERS

- A. General: Comply with joint sealer manufacturer's printed installation instructions, including "tooling" and all techniques applicable to products and applications indicated, except where more stringent requirements apply
- B. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications and conditions indicated.
- C. Latex Sealant Installation Standard: Comply with requirements of ASTM C 790 for use of latex sealants
- D. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
 - 1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.
 - a. Do not leave gaps between ends of joint fillers.
 - b. Do not stretch, twist, puncture, or tear joint fillers
 - c. Remove absorbent fillers which have become wet prior to sealant application and replace with dry material.
 - 2. Install bond breaker tape between sealants and joint fillers, compression seals, or back of joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.
- E. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.
- F. Sill weeps: Where weep holes exist at joints to be replaced with sealant and at lintel joints above openings, provide weeps and install sealant to assure weeps remain functional.
- G. Tooling of Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
 - 1. Provide concave joint configuration per Figure 6A in ASTM C 962, unless otherwise indicated.
 - a. Use masking tape to protect adjacent surfaces of recessed tooled joints

3.04 PROTECTION AND CLEANING

- A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of substantial completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and reseal joints with new materials to product joint sealer installations with repaired areas indistinguishable from original work.
- B. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

3.05 ELASTOMERIC JOINT SEALANT SCHEDULE

- A. Low-Modulus Polyurethane Joint Sealant:
 - 1. Base Polymer: Polyurethane
 - 2. Type: S
 - 3. Grade: NS (Non sag)
 - 4. Class: 25
 - 5. Description: one-part silyl-terminated non-sag elastomeric sealant
 - 6. Use Related to Exposure: NT (non traffic)
 - 7. Use Related to Joint Substrates: M, G, and as applicable, to joint substrates indicated, O.
 - 8. Basis of Design
 - 9. BASF Masterseal NP 150
 - a. Or approved equal: approved equal must include 10 year warranty

END OF SECTION

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PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish and install aluminum architectural sliding glass doors complete with hardware and related components as shown on drawings and specified in this section.
- B. Basis of Design: EFCO® Series 3000 Thermal CW-PG55-SD Sliding Glass Doors..
 - 1. Acceptable manufacturers
 - a. Kawneer
 - b. US Aluminum
 - c. Approved Equal
 - 2. Test reports documenting compliance with requirements of Section 1.05.
- C. Glass and Glazing
 - 1. All units shall be factory glazed.
 - OR
 - 2. Reference Section 08 40 00 for Glass and Glazing.
- D. Single Source Requirement
 - 1. All products listed in Section 1.02 shall be by the same manufacturer.

1.02 RELATED WORK

- A. Section 08 40 00 – Aluminum Entrances and Storefronts

1.03 LABORATORY TESTING AND PERFORMANCE REQUIREMENTS

- A. Test Units
 - 1. Air, water, and structural test unit shall conform to requirements set forth in AAMA/WDMA/CSA 101/I.S.2/A440-08 and manufacturer's standard locking/operating hardware and insulated glazing configuration.
 - 2. Thermal test unit sizes shall be 74" (1880 mm) x 81" (2057 mm). Unit shall consist of an OX sliding glass door.
- B. Test Procedures and Performances
 - 1. Sliding glass doors shall conform to all AAMA/WDMA/CSA 101/I.S.2/A440-08 requirements for the door type referenced in 1.01.B. In addition, the following specific performance requirements shall be met.
 - 2. Air Infiltration Test
 - a. With door sash closed and locked, test unit in accordance with ASTM E 283 at a static air pressure difference of 6.27 psf (300 Pa).
 - b. Air infiltration shall not exceed .30 cfm/SF (1.5 l/s•m² of unit).
 - 3. Water Resistance Test
 - a. With door sash closed and locked, test unit in accordance with ASTM E 331 at a static air pressure difference of 8.25 psf (400 Pa).
 - b. There shall be no uncontrolled water leakage.

4. Uniform Load Deflection Test
 - a. With door sash closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 55 psf (2633 Pa), positive and negative pressure.
 - b. No member shall deflect over $L/175$ of its span.
 5. Uniform Load Structural Test
 - a. With door sash closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 82.5 psf (3960 Pa), both positive and negative.
 - b. At conclusion of test there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms, nor any other damage that would cause the sliding glass door to be inoperable.
 6. Forced Entry Resistance
 - a. Sliding glass doors shall be tested in accordance to ASTM F 842 or AAMA 1303.5 and meet the requirements of performance level 10.
 7. Condensation Resistance Test (CRF)
 - a. Test unit in accordance with AAMA 1503.1.
 - b. Condensation Resistance Factor (CRF) shall not be less than 45"(frame) when glazed with 0.47 center of glass U-Factor.
 8. Condensation Resistance (CR)
 - a. With ventilators closed and locked, test unit in accordance with NFRC 500- 2010.
 - b. Condensation Resistance (CR) shall not be less than 36 when glazed with a 0.47 center of glass U-Factor.
 9. Thermal Transmittance Test (Conductive U-Factor)
 - a. With ventilators closed and locked, test unit in accordance with NFRC 100- 2010.
 - b. Conductive thermal transmittance (U-Factor) shall not be more than 0.40 BTU/hr•ft²•°F (3.35W/m²•K) when glazed with 0.29 center of glass U-Factor.
- C. Project Wind Loads
1. The system shall be designed to withstand the minimum following loads normal to the plane of the wall:
 - a. Positive pressure of 20psf (958 Pa) at non-corner zones.
 - b. Negative pressure of 20psf (958 Pa) at non-corner zones.
 - c. Negative pressure of 20psf (958 Pa) at corner zones.

1.04 FIELD TESTING AND PERFORMANCE REQUIREMENTS

- A. Windows shall be field tested in accordance with AAMA 502, "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors," using Test Method B.
 1. Test one additional window or two percent of the window installation, whichever is greater, for air infiltration and water penetration as specified.
 2. Cost for all successful tests, both original and retest shall be paid by the owner. All unsuccessful tests, both original and retest, shall be paid by the responsible contractor.

3. Testing shall be by an AAMA accredited testing agency selected by the architect and window manufacturer and employed by the responsible contractor.
4. Air infiltration field tests shall be conducted at the same uniform static test pressure as the laboratory test unit. The Maximum allowable rate of air leakage shall not exceed 1.5 times the laboratory test unit for hardware and glazing types consistent with the laboratory test unit. Performance values may be reduced due to deviations from the laboratory test unit such as product size, configuration, hardware selected, and glazing configuration. The field test air leakage rate shall not exceed 1.5 times the maximum allowable laboratory performance specified in the testing criteria listed in Section 1.05.A.1 for any configuration.
5. Water penetration field tests shall be conducted at a static test pressure of 2/3 of the laboratory test performance values for hardware and glazing types consistent with the laboratory test unit. Performance values may be reduced due to deviations from the laboratory test unit such as product size, configuration, hardware selected, and glazing variations. The field test water test pressure shall not be less than 2/3 of the minimum allowable laboratory performance specified in the testing criteria listed in Section 1.05.A.1 for any configuration.

1.05 QUALITY ASSURANCE

- A. Provide test reports from AAMA accredited laboratories certifying the performance as specified in 1.04.
- B. Test reports shall be accompanied by the sliding glass door manufacturer's letter of certification, stating the tested door meets or exceeds the referenced criteria for the appropriate door type.

1.06 SUBMITTALS

- A. Contractor shall submit shop drawings; finish samples, test reports, and warranties.
 1. Samples of materials as may be requested without cost to owner, i.e., metal, glass, fasteners, anchors, frame sections, mullion section, corner section, etc.
- B. An NFRC Component Modeling Approach (CMA) generated label certificate shall be provided by the manufacturer. The label certificate shall be project specific and will contain the thermal performance ratings of the manufacturer's framing combined with the specified glass, and the glass spacer used in the fabrication of the glass, at NFRC standard test size as defined in table 4-3 in NFRC 100-2010.

1.07 WARRANTIES

- A. Total Sliding Glass Door Installation
 1. The responsible contractor shall assume full responsibility and warrant for one year the satisfactory performance of the total door installation which includes that of the doors, hardware, glass (including insulated units), glazing, anchorage and setting system, sealing, flashing, etc., as it relates to air, water, and structural adequacy as called for in the specifications and approved shop drawings.
 2. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible contractor at their expense during the warranty period.
- B. Window Material and Workmanship
 1. Provide written guarantee against defects in material and workmanship for 5 years from the date of final shipment.
- C. Glass

1. Provide written warranty for insulated glass units that they will be free from obstruction of vision as a result of dust or film formation on the internal glass surfaces caused by failure of the hermetic seal due to defects in material and workmanship.
 2. Warranty period shall be for 10 (ten) years.
- D. Finish
1. Warranty period shall be for 5 years from the date of substantial completion.
 2. Provide organic finish warranty based on AAMA standard 2605.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Aluminum
1. Extruded aluminum shall be 6063-T6 alloy and tempered.
- B. Hardware
1. Locking hardware shall be Sobinco or Adams Rite dead lock thumbturn.
 2. Door sash shall ride on a pair of adjustable, tandem mounted, steel, ball bearing rollers.
- C. Weather-Strip
1. All primary weather-strip shall be TRIPLE FIN® as manufactured by Ultrafab, Inc. or equal.
- D. Glazing
1. Annealed and Kind FT (fully tempered)
- E. Thermal Barrier
1. All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier. For purposes of this specification, a structural thermal barrier is defined as a system that shall transfer shear during bending and, therefore, promote composite action between the exterior and interior extrusions.
 2. Barrier material shall be poured-in-place, two-part polyurethane. A nonstructural thermal barrier is unacceptable.

2.02 FABRICATION

- A. General
1. All aluminum head and jamb frame members shall have a minimum wall thickness of .080" (2 mm). Sash extrusions shall have a minimum wall thickness of .062" (1.5 mm). Frame sill members shall have a minimum wall thickness of .125" (3 mm).
 2. Depth of frame shall not be less than 3 1/4" (82 mm).
 3. Mechanical fasteners, welded components, and hardware items shall not bridge thermal barriers.
- B. Frame
1. Frame components shall be mechanically fastened.
 2. Frame and sash shall have a continuous interlock at the meeting rail.
- C. Sash

1. Sash vertical members shall telescope into the sash horizontals and be mechanically fastened.

D. Glazing

1. All units shall be glazed with the manufacturer's standard sealant process provided the glass is held in place by a removable, extruded aluminum, glazing bead. The glazing bead must be isolated from the glazing material by a gasket.
2. All units shall be glazed with a minimum of 1/2" glass bite.

E. Finish

1. Anodic
 - a. Finish all exposed areas of aluminum windows and components with electrolytically deposited color in accordance with Aluminum Association Designation AA-M10-C22-41
 - b. Color shall be Clear Anodized.

AA Description	Description	Arch. Class	AAMA Guide Spec.
AA-M10-C22-A41	Clear Anodized	1	611-14

PART 3 - EXECUTION

3.01 INSPECTION

A. Job Conditions

1. Verify that openings are dimensionally within allowable tolerances, plumb, level, clean, provide a solid anchoring surface, and are in accordance with approved shop drawings.
2. Provide for manufacturer representation to conduct pre-installation site meeting.

3.02 INSTALLATION

- A. Use only skilled tradesmen with work done in accordance with approved shop drawings and specifications.
- B. Plumb and align door faces in a single plane for each wall plane, and erect doors and materials square and true. Adequately anchor to maintain positions permanently when subjected to normal thermal movement, specified building movement, and specified wind loads.
- C. Adjust doors for proper operation after installation.
- D. Furnish and apply sealants to provide a weather tight installation at all joints and intersections and at opening perimeters. Wipe off excess material and leave all exposed surfaces and joints clean and smooth.

3.03 ANCHORAGE

- A. Adequately anchor to maintain positions permanently when subjected to normal thermal movement, specified building movement, and specified wind loads.

3.04 PROTECTION AND CLEANING

- A. After completion of sliding glass door installation, doors shall be inspected, adjusted, put into working order and left clean, free of labels, dirt, etc. Protection from this point shall be the responsibility of the general contractor.

- B. A bi-annual sweet water rinse is recommended to prohibit dirt, dust, and debris from accumulation on the surface of the coating and to help maintain the aesthetic of the coating.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED SECTIONS

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

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Aluminum storefront framing
 - 2. Glazing
 - 3. Sealants associated with storefront systems
 - 4. Aluminum entry doors
 - 5. Door sills
- B. Aluminum flashings
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Weather Barriers
 - 2. Sealants
 - 3. Hardware

1.03 SYSTEM DESCRIPTION

- A. General: Provide glazed storefront systems that have the following capabilities based on testing manufacturer's standard units in assemblies similar to those indicated for this Project:
 - 1. Withstands loads and thermal and structural movement requirements indicated without failure. Failure includes the following:
 - a. Air infiltration and water penetration exceeding specified limits.
 - b. Framing members transferring stresses, including those caused by thermal and structural movement, to glazing units.
 - 2. Shop drawings are to be stamped by a structural engineer, currently licensed in Washington State, confirming that the curtain wall and storefront systems meet or exceed specified structural performance characteristics.
- B. Glazing is physically and thermally isolated from framing members.
- C. System shall be able to be re-glazed from the exterior.
- D. Wind Loads: Provide glazed curtain wall and storefront systems, including anchorage, capable of withstanding wind-load design pressures calculated according to requirements of authorities having jurisdiction or the American Society of Civil Engineers' ASCE 7, "Minimum Design Loads for Buildings and Other Structures," 6.4.2, "Analytical Procedure," whichever are more stringent.
 - 1. Static-Pressure Test Performance: Provide curtain wall and storefront system that do not evidence material failures, structural distress, failure of operating components to function normally, or permanent deformation of main framing members exceeding 0.2 percent of clear span when tested according to ASTM E 330.
 - a. Test Pressure: 150 percent of inward and outward wind-load design pressures.

- b. Duration: As required by design wind velocity; fastest 1 mile of wind for relevant exposure category.
- E. Seismic Loads: Provide curtain wall and storefront systems, including anchorage, capable of withstanding the effects of earthquake motions calculated according to requirements of authorities having jurisdiction or ASCE 7, "Minimum Design Loads for Buildings and Other Structures," Section 9, "Earthquake Loads," whichever are more stringent.
- F. Dead Loads: Provide glazed curtain wall and storefront system members that do not deflect an amount which will reduce glazing bite below 75 percent of design dimension when carrying full dead load.
 - 1. Provide a minimum 1/16-inch (1.59 mm) clearance between members and operable windows and doors.
- G. Live Loads: Provide curtain wall and storefront systems, including anchorage, that accommodates supporting structure's deflection from uniformly distributed and concentrated live loads indicated without failure of materials or permanent deformation.
- H. Air Infiltration: Provide curtain wall and storefront systems with permanent resistance to air leakage through system of not more than 0.06 cfm/sq.ft. (0.3 L/s/sq. m) of fixed wall area when tested according to ASTM E 283 at a static-air-pressure difference of 6.24 lbf/sq.ft.
- I. Water Penetration: Provide glazed curtain wall and storefront systems that do not evidence water leakage when tested according to ASTM E 331 at minimum differential pressure of 20 percent of inward acting wind-load design pressure as defined by ASCE 7, "Minimum Design Loads for Buildings and Other Structures," but not less than 10 lbf/sq.ft.
 - 1. Water leakage is defined as follows: Uncontrolled water infiltrating systems or appearing on systems' normally exposed interior surfaces from sources other than condensation. Water controlled by flashing and gutters that is drained back to the exterior and cannot damage adjacent materials or finishes is not water leakage.
- J. Thermal Movements: Provide curtain wall and storefront systems, including anchorage, that accommodates thermal movements of system and supporting elements resulting from the following maximum change (range) in ambient and surface temperatures without buckling, damaging stresses on glazing, failure of joint sealants, damaging loads on fasteners, noise or vibration, and other detrimental effects.
- K. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- L. Structural Support Movement: Provide curtain wall and storefront systems that accommodate structural movements including, but not limited to, sway and deflection.
- M. Condensation Resistance: Provide curtain wall and storefront systems with condensation-resistance factor (CRF) of not less than 45 when tested according to AAMA 1503.1.
- N. Dimensional Tolerances: Provide curtain wall and storefront systems, including anchorage, that accommodates dimensional tolerances of building frame and other adjacent construction.
- O. Average Thermal Conductance: Provide curtain wall and storefront systems with average U-values of not more than 0.38 Btu/sq.Ft. x h x deg F when tested according to AAMA 1503.1.
- P. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacture's published test data, as determined according to procedures indicated below:
 - 1. For monolithic-glass lites, properties are based on units with lites 6 mm thick.

2. For laminated-glass lites, properties are based on products of construction indicated.
 - a. For insulating-glass units, properties are based on units with a 1" overall nominal thickness (1/4" lites with 1/2" airspace)..
3. Center-of-Glass U-Values: NFRC 100 methodology using LBL-35298 WINDOW 4.1 computer program, expressed as Btu/sq.ft. x h x deg F.
- Q. Center-of-Glass Solar Heat Gain Coefficient: NFRC 200 methodology using LBL-35298 WINDOW 4.1 computer program.
 1. Solar Optical properties: NFRC 300.

1.04 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification sections.
- B. Product Data for each product specified, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.
- C. Thermal performance: include test data referenced in paragraph O above that glazing assembly has been tested in accordance with the listed methodology and indicating the glazing assembly meets the specified U-Value.
- D. Shop Drawings showing fabrication and installation of curtain wall and storefront systems including plans, elevations, sections, details of components, and attachments to other units of Work.
 1. For curtain wall systems, include hardware schedule and indicate operating hardware types, quantities, and locations.
- E. Samples for verification of each type of exposed finish required in manufacturer's standard sizes. Where finishes involve normal color and texture variations, include Sample sets showing the full range of variations expected.
- F. Sealant Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating that materials forming joint substrate and joint-sealant backings have been tested for compatibility and adhesion with sealants; include joint sealant manufacturer's written interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed to obtain adhesion.
- G. Product Test Reports: Based on evaluation of test performed by manufacturer and witnessed by a qualified independent testing agency, indicate compliance of curtain wall and storefront systems with requirements based on comprehensive testing of current systems.
- H. Installer certificates signed by manufacturer certifying that installers comply with specified requirements.
- I. Thermal Loading: Design glass to resist thermal loads at service including those induced by differential shading within individual glass lites

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer to assume engineering responsibility and perform work of this Section who has specialized experience in installing curtain wall and storefront systems similar to those required for this Project and who is acceptable to manufacturer.

- B. Source Limitations: Obtain each type of curtain wall and storefront system from one source and by a single manufacturer.
- C. Product Options: Drawings indicated size, profiles, and dimensional requirements of glazed aluminum curtain wall and storefront system are based on the specific system indicated. Other manufacturers' systems with equal performance characteristics may be considered. Refer to Division 1 Section 01 63 00.
 - 1. Do not modify intended aesthetic effects, as judged solely by architect, except with Architect's approval and only to the extent needed to comply with performance requirements. Where modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. Welding Standards: Comply with applicable provisions of AWWSD D1.2, "Structural Welding Code—Aluminum."
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 1 Section "Project Meetings."

1.06 PROJECT CONDITIONS

- A. Field Measurements: Verify dimensions by field measurements before fabrication and show recorded measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Where field measurements cannot be made without delaying the Work, guarantee dimensions and proceed with fabrication without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.07 WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the contract documents.
- B. Special Warranty: Submit a written warranty executed by the manufacturer agreeing to repair or replace components of a glazed aluminum storefront system that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, the following:
 - 1. Structural failures including, but not limited to, excessive deflection.
 - 2. Noise or vibration caused by thermal movements.
 - 3. Failure of system to meet performance requirements.
- C. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 1. Failure of operating components to function normally.
 - 2. Water leakage.
 - 3. Glazing breakage.
- D. Warranty Periods:
 - 1. Storefront Installer: 2 years
 - 2. Storefront manufacturer:

- a. Finishes
 - 1) Anodized aluminum: 10 years
 - 2) Painted: 20 years
- b. Material and Workmanship: 10 years
- 3. Insulating glass Seal: 10 years

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer: provide Aluminum Storefront Systems products by the following (refer to the drawings for the locations and quantities):
 - 1. Storefront system - Basis-of-Design
 - a. Kawneer, Trifab VG451T 2" X 4 ½ ", thermally broken for 1" insulated glass units
 - 1) Glazing assembly as required to meet maximum of .38 U-Value
 - b. Substitutions under provisions of 00 26 00
 - 2. Aluminum Entry Doors - Basis of Design:
 - a. Kawneer Wide Stile Series AA 425 Thermal Entrance Doors
 - b. Substitutions under provisions of 00 26 00

2.02 MATERIALS

- A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated, complying with the requirements of standards indicated below.
 - 1. Sheet and Plate: ASTM B 209 (ASTM B 209M)
 - 2. Extruded Bars, Rods, Shapes, and Tubes: ASTM B 221 (ASTM B 221M).
 - 3. Extruded Structural Pipe and Tubes: ASTM B 429.
 - 4. Bars, Rods, and Wire: ASTM B 211.
- B. Steel Reinforcement: ASTM A 36 (ASTM A 36M) for structural shapes, plates, and bars; ASTM A 611 for cold-rolled sheet and strip; or ASTM A 570 (ASTM A 570M) for hot-rolled sheet and strip.
- C. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers; in hardness recommended by manufacturer.
- D. Glazing sealants and fillers as specified in Division 8 Section "Glazing."
- E. Framing system gaskets and joint fillers as recommended by manufacturer for joint type.
- F. Sealants and joint fillers for joints within curtain wall and storefront systems as specified in Division 7 Section "Joint Sealants."
- G. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements, except containing no asbestos, formulated for 30-mil (0.762 mm) thickness per coat.

- H. Spacers, Setting Blocks, Gaskets, and Bond Breakers: Manufacturer's standard permanent, nonmigrating types in hardness recommended by manufacturer, compatible with sealants, and suitable for system performance requirements; maximum 1/6 pt. loading, typical.
- I. Thermal Performance: When tested in accordance with AAMA 1503.1, and 1502.7, the following results should be attained:
 - 1. Fixed lights: U-value maximum of .38
 - 2. Operable sections: U-value maximum of .55

2.03 COMPONENTS

- A. Brackets and Reinforcements: Provide manufacturer's standard high-strength aluminum brackets and reinforcements. Provide nonstaining, nonferrous shims for aligning system components.
- B. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
 - 1. Reinforce members as required to retain fastener threads.
 - 2. Do not use exposed fasteners, except for hardware application. For hardware application, use countersunk Phillips flat-head machine screws finished to match framing members or hardware being fastened, unless otherwise indicated.
- C. Anchors: 3-way adjustable anchors that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
 - 1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123 or ASTM A 153 requirements.
- D. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing, compatible with adjacent materials, and of type recommended by manufacturer.
- E. Weather Stripping: Manufacturer's standard replaceable weather-stripping as follows:
 - 1. Compression Weather Stripping: Molded neoprene complying with ASTM D 2000 requirements or molded PVC complying with ASTM D 2287 requirements.
 - 2. Sliding Weather Stripping: Wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing complying with AAMA 701 requirements.

2.04 FABRICATION

- A. General: Fabricate glazed aluminum curtain wall and storefront system according to Shop Drawings. Fabricate components that, when assembled, will have accurately fitted joints with ends coped or mitered to produce hairline joints free of burrs and distortion. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.
- B. Forming: Form shapes with sharp profiles, straight and free of defects or deformations, before finishing.
- C. Prepare components to receive concealed fasteners and anchor and connection devices.
- D. Fabricate components to drain water passing joints, condensation occurring in glazing channels, condensation occurring within framing members, and moisture migrating within the system to the exterior.
- E. Glazing Pockets: Provide minimum clearances for thickness and type of glass indicated according to FGMA's "Glazing Manual."

- F. Metal Protection: Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- G. Entrances: Fabricate door framing in profiles indicated. Reinforce as required to support imposed loads. Factory assemble door and frame units and factory install hardware to greatest extent possible. Reinforce door and frame units as required for installing hardware indicated. Cut, drill, and tap for factory-installed hardware before finishing components. Hardware Consultant shall coordinate installation of hardware to be provided by others for installation at the factory.
 - 1. Exterior Doors: Provide compression weather stripping at fixed stops. At other locations, provide sliding weather stripping retained in adjustable strip mortised into door edge. Automatic openers shall be coordinated with the aluminum frame for proper mounting.

2.05 ENTRANCES

- A. Doors: Kawneer Wide Stile, Series AA 425 Thermal Entrances, wide stile entrance doors standard 2 1/4" thick single acting doors. Door members shall be extruded 6063-TS aluminum alloy (ASTM B221-Alloy G.S. 10a T5. Screws, fastening devices, and internal components: aluminum, stainless steel or zinc plated steel in accordance with ASTM A-164, steel shall be properly isolated from aluminum. Glazing gasket (compression type design.)
 - 1. Glazing Stops and Gaskets: Provide manufacturer's standard snap-on extruded-aluminum glazing stops and preformed gaskets.
 - 2. Stile Design: 4 1/4" vertical stiles; 4 1/4" top rail; 10" bottom rail.
 - 3. Push and Pull hardware : Architectural Classic Push Pull –
 - 4. Wall Thickness: 1/8" typical wall thickness
 - 5. Construction: Dual welded corner construction
 - 6. Hinges: Continuous geared hinges
 - 7. Closers: Refer to Hardware group.
 - 8. Glazing: 1" insulated glazing
 - 9. Thermal: Sealair bulb Polymeric weatherstripping and pile weathering with polymeric fin in door frame.

2.06 ALUMINUM FINISHES

- A. General: comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Aluminum Finishes:
 - 1. Exterior Finish: Class I, Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated: Chemical Finish: etched, medium matte, Anodic Coating: Architectural Class I, 0.018 mm or thicker) complying with AAMA 611

2. Color: Dark Bronze

2.07 GLASS SCHEDULE

A. Insulating Vision Glass

1. Low E coated insulating vision glass
 - a. Annealed, Heat Strengthened, or Fully Tempered as required by application and as required by code
 - b. Outboard lite: 6mm (1/4") clear glass with low E coating on #2 surface
 - c. Space: 2.7mm (1/2") 90% argon/10% air gas fill
 - d. Inboard lite: 6mm (1/4") clear glass
2. Acceptable low E Coatings:
 - a. Guardian SN 68
 - b. PPG Solarban 60
3. Center-of-glass values
 - a. Visible Light Transmittance: 68% minimum
 - b. Winter U value: 25 maximum
 - c. Solar Heat Gain Coefficient: 38 maximum
 - d. Exterior Visible Light Reflectance: 11% maximum
 - e. Interior Visible Light Reflectance: 13% maximum

B. Insulating Spandrel Glass

1. Same as Vision Glass with opacifier as noted
 - a. Annealed, Heat Strengthened, or Fully Tempered as required by application and as required by code
 - b. Outboard lite: 6mm (1/4") clear glass with low E coating on #2 surface
 - c. Space: 12.7mm (1/2") 90% argon/10% air gas fill
 - d. Inboard lite: 6mm (1/4") clear glass with opacifier on #4 surface
 - 1) Opacifier: Ceramic Frit or ICD Opaci-Coat Siliconized Paint
 - 2) Color: Warm Gray
2. Center-of-glass values- Spandrel units
 - a. Visible Light Transmittance: 2% maximum
 - b. U value: 25 maximum
 - c. Solar Heat Gain Coefficient: 38 maximum
 - d. Exterior Visible Light Reflectance: 19% maximum
 - e. Interior Visible Light Reflectance: 33% maximum

2.08 SEALANTS

- A. Refer to Section 07 92 00

2.09 DOOR SILLS

- A. Manufactures standard sill profile with maximum rise of ½" meeting ADA tolerances.

2.10 MEMBRANE FLASHINGS

- A. Refer to Section 07 25 00

2.11 PREFINISHED FLASHINGS

- A. Aluminum shapes with finish to match storefront; thickness: 0.040"
- B. Stainless steel flashings – refer to Section 07 62 00

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of curtain wall and storefront systems. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: comply with manufacturer's written instructions for protecting, handling, and installing glazed aluminum curtain wall and storefront system. Do not install damaged components. Fit joints to produce hairline joints free of burrs and distortion. Rigidly secure nonmovement joints. Seal joints watertight, unless otherwise indicated. Provide means to drain water to the exterior to produce a permanently weatherproof system.
- B. Metal Protection: Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- C. Install components to drain water passing joints, condensation occurring in glazing channels, condensation occurring within framing members, and moisture migrating within the system to the exterior.
- D. Set continuous sill members and flashing in a full sealant bed to provide weathertight construction, unless otherwise indicated. Comply with requirements of Division 7 Section Joint Sealants.
- E. Install glazing according to Shop Drawings. Comply with requirements of Division 8 Section "Glazing," unless otherwise indicated.
- F. Install perimeter sealant to comply with requirements of Division 7 Section Joint Sealants, unless otherwise indicated.
- G. Erection Tolerances: Install glazed aluminum curtain wall system to comply with the following maximum tolerances:
 - 1. Plumb: 1/8 inch in 12 feet; ¼ inch in 40 feet.
 - 2. Level: 1/8 inch in 20 feet ¼ inch in 40 feet.
 - 3. Alignment: Where surfaces abut in line, limit offset from true alignment to 1/16 inch; where a reveal or protruding element separates aligned surfaces by less than 2 inches limit offset to ½ inch.

4. Location: Limit variation from plane or location shown on Shop Drawings to 1/8 inch in 12 feet; 1/2 inch over total length.

3.03 FIELD QUALITY CONTROL

- A. Water Spray Test: After completing the installation of test areas indicated, test storefront system for water penetration according to AAMA 501.2 requirements.
- B. Repair or remove and replace Work that does not meet requirements or that is damaged by testing; replace to conform to specified requirements.

3.04 ADJUSTING AND CLEANING

- A. Adjust doors and hardware to provide tight fit at contact joints and weather stripping, smooth operation, and weathertight closure.
- B. Remove excess sealant and glazing compounds, and dirt from surfaces.

3.05 PROTECTION

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer that ensure glazed aluminum storefront system is without damage or deterioration at the time of Substantial Completion.

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all items of finish hardware for the project as shown on the drawings or included herein, including appropriate fasteners and miscellaneous materials as required to complete the work of this section and provide a proper installation.
- B. Except as noted herein, hardware items listed elsewhere in this specification shall not be a requirement of this division.
- C. Provide all hardware specified; "less cylinder" bids will not be accepted.

1.02 RELATED WORK

- A. The following Sections may contain requirements that relate to this section:
 - 1. Section 00 85 00 Unique Project Conditions (FOIC items)
 - 2. Section 08 40 00 Aluminum Entrances and Storefronts

1.03 SUBMITTALS: *SUBMIT THE FOLLOWING IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT AND DIVISION 1 SPECIFICATION SECTIONS.*

- A. Finish Hardware Schedule:
 - 1. At the earliest possible date after receipt of purchase order submit six copies of the completely detailed hardware schedule. List hardware schedule for each door opening separately, using a vertical format per the sample hardware set below. Provide two copies of catalog cuts for each item proposed for use on this project. Provide physical samples when requested by the architect.
 - 2. Promptly incorporate any corrections and changes in the reviewed submittal and return four copies of the revised schedule to the contractor for his use and distribution.
 - 3. Acceptance of the hardware schedule does not relieve the supplier of responsibility for errors or omissions.
- B. Templates: Upon receipt of reviewed schedule supply templates or physical hardware to fabricator of factory prepared doors, frames, and other work affected. Upon request, check the associated shop drawings to confirm that adequate provisions are made for proper installations.
- C. Special Tools: The contractor is to provide to the owner two sets of any special tools shipped with the finish hardware products required for maintenance and installation. Deliver to owner at completion of work.
- D. Operations and Maintenance Data: Submit required sets of maintenance manuals per Division 1, which shall include as-built Hardware Schedule, catalog cuts, template lists with templates and warranty information. One additional copy shall either be delivered with the Permanent keys or given separately to the maintenance department at the completion of the construction period. This copy shall contain parts data for exit devices, locksets and closers, and catalog cuts of all electrical products, including manufacturer's name.

1.04 QUALITY ASSURANCE

- A. Supplier Qualifications:

1. A recognized distributor who has been furnishing hardware in the same area as the project for a period of not less than 5 years and has successfully completed projects similar in type and scope. The distributors' organization shall employ qualified Architectural Hardware Consultants and licensed locksmiths who are available at all reasonable times during the course of construction to meet with the owner, architect or contractor for hardware or keying consultation.
 2. The Hardware supplier shall be a local, factory authorized distributor of the material provided and shall maintain a stock and parts inventory of all standard items supplied on the project for future service to the owner.
- B. Fire rated Openings: Provide listed door hardware at fire rated openings that complies with NFPA 80 and the requirements of the authority having jurisdiction.
- C. Requests for substitutions should be addressed to the Architect as indicated elsewhere. Requests will be accepted only from distributors qualified to bid on the project. Approvals will be in writing or by addenda.

1.05 REFERENCE STANDARDS

- A. ANSI/NFPA - NO. 80 FIRE DOORS AND WINDOWS, 2022
- B. ANSI/NFPA - NO. 101 LIFE SAFETY CODE 2021
- C. IBC 2018
- D. Department of Justice Public Law 101-336 – Americans with Disabilities Act.
- E. ANSI/BHMA REFERENCE STANDARDS 156.xx
 - ANSI 156.1 Butts and Hinges
 - ANSI 156.2 Bored Locks and Latches
 - ANSI 156.3 Exit Devices
 - ANSI 156.4 Door Controls – Closers
 - ANSI 156.5 Auxiliary Locks and Associated Products
 - ANSI 156.6 Architectural Door Trim
 - ANSI 156.7 Template Hinge Dimensions
 - ANSI 156.8 Door Controls – Overhead Holders
 - ANSI 156.13 Mortise Locks and Latches
 - ANSI 156.14 Sliding and Folding Door Hardware
 - ANSI 156.15 Closer Holder Release Devices
 - ANSI 156.16 Auxiliary Hardware
 - ANSI 156.17 Self Closing Hinges and Pivots
 - ANSI 156.18 Materials and Finishes

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Tag each item or package to clearly identify the item and its intended location. Package in containers clearly marked with door number.

1.07 WARRANTY

- A. The finish hardware shall carry a limited warranty against defects in workmanship and operation for a period of one year from date of substantial completion. Door closers shall have a 10 year limited warranty. Electrical components will be covered under the manufacturers' standard warranty.

PART 2 - PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Provide door hardware products that comply with the following requirements:
 - 1. Applicable provisions of federal, state, and local codes.
 - 2. Accessibility: ADA Standards and ICC A117.1.

2.02 HINGES

- A. Hinges: Complying with BHMA A156.1, Grade 1.
 - 1. Butt Hinges: Complying with BHMA A156.1 and BHMA A156.7 for templated hinges.
 - a. Provide hinge width required to clear surrounding trim.
 - 2. Provide hinges on every swinging door.
 - 3. Provide following quantity of butt hinges for each door:
 - a. Doors From 60 inches (1.5 m) High up to 90 inches (2.3 m) High: Three hinges.

2.03 FLUSHBOLTS

- A. Flushbolts: Complying with BHMA A156.16, Grade 1.
 - 1. Flushbolt Throw: 3/4 inch (19 mm), minimum. Provides extension bolts in leading edge of door, one bolt into floor, one bolt into top of frame.
 - a. Pairs of Swing Doors: At inactive leaves, provide flushbolts of type as required to comply with code.

2.04 EXIT DEVICES

- A. Exit Devices: Complying with BHMA A156.3, Grade 1.
 - 1. Lever design to match lockset trim.
- B. Provide cylinder with cylinder dogging or locking trim.
 - 1. Provide exit devices properly sized for door width and height.
 - 2. Provide strike as recommended by manufacturer for application indicated.
 - 3. Provide UL (DIR) listed exit device assemblies for fire-rated doors and panic device assemblies for non-fire-rated doors.

2.05 LOCK CYLINDERS

- A. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.

1. Provide cylinders from same manufacturer as locking device.
2. Provide cams and/or tailpieces as required for locking devices.

2.06 CYLINDRICAL LOCKS

- A. Cylindrical Locks (Bored): Complying with BHMA A156.2, Grade 1, 4000 Series.
 1. Bored Hole: 2-1/8 inch (54 mm) diameter.
 2. Latchbolt Throw: 1/2 inch (12.7 mm), minimum.
 3. Backset: 2-3/4 inch (70 mm) unless otherwise indicated.
 4. Strikes: Provide manufacturer's standard strike for each latchset or lockset with strike box and curved lip extending to protect frame in compliance with indicated requirements.
 - a. Finish: To match lock or latch.

2.07 DOOR PULLS AND PUSH PLATES

- A. Door Pulls and Push Plates: Complying with BHMA A156.6.
 1. Pull Type: Straight, unless otherwise indicated.
 2. Push Plate Type: Flat, with square corners, unless otherwise indicated.
 - a. Edges: Beveled, unless otherwise indicated.
 3. Material: Aluminum, unless otherwise indicated.

2.08 DOOR PULLS AND PUSH BARS

- A. Door Pulls and Push Bars: Complying with BHMA A156.6.
 1. Bar Type: Bar set, unless otherwise indicated.
 2. Material: Aluminum, unless otherwise indicated.

2.09 COORDINATORS

- A. Coordinators: Provide on doors having closers and self-latching or automatic flushbolts to ensure that inactive door leaf closes before active door leaf.
 1. Type: Bar, unless otherwise indicated.
 2. Material: Aluminum, unless otherwise indicated.
 3. Ensure that coordination of other door hardware affected by placement of coordinators and carry bar is applied properly for completely operable installation.

2.10 CLOSERS

- A. Closers: Complying with BHMA A156.4, Grade 1.
- B. Type: Surface mounted to door.
- C. Provide door closer on each exterior door.
 1. At outswinging exterior doors, mount closer on interior side of door.

2.11 PROTECTION PLATES

- A. Protection Plates: Complying with BHMA A156.6.
- B. Edges: Beveled, on four sides unless otherwise indicated.

- C. Fasteners: Countersunk screw fasteners.

2.12 KICK PLATES

- A. Kick Plates: Provide along bottom edge of push side of every door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated.

1. Size: 8 inch (203 mm) high by 2 inch (51 mm) less door width (LDW) on push side of door.

2.13 WALL STOPS

- A. Wall Stops: Complying with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.

1. Provide wall stops to prevent damage to wall surface upon opening door.

- B. Type: Bumper, concave, wall stop.

1. Material: Aluminum housing with rubber insert.

2.14 THRESHOLDS

- A. Thresholds: Complying with BHMA A156.21.

1. Provide threshold at each exterior door, unless otherwise indicated.
2. Type: Flat surface.
3. Material: Aluminum.
4. Threshold Surface: Fluted horizontal grooves across full width.
5. Field cut threshold to profile of frame and width of door sill for tight fit.
6. Provide non-corroding fasteners at exterior locations.

2.15 WEATHERSTRIPPING AND GASKETING

- A. Weatherstripping and Gasketing: Complying with BHMA A156.22.

1. Head and Jamb Type: Adjustable.
2. Door Sweep Type: Encased in retainer.
3. Material: Aluminum, with brush weatherstripping.
4. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated; .
5. Provide door bottom sweep on each exterior door, unless otherwise indicated.

2.16 SILENCERS

- A. Silencers: Provide at equal locations on door frame to mute sound of door's impact upon closing.

1. Single Door: Provide three on strike jamb of frame.
2. Pair of Doors: Provide two on head of frame, one for each door at latch side.
3. Material: Rubber, gray color.

2.17 FINISHES

- A. Finishes: Provide door hardware of same finish, unless otherwise indicated.

1. Primary Finish: 625; bright chromium plated over nickel, with brass or bronze base material (former US equivalent US26); BHMA A156.18.
2. Secondary Finish: 626; satin chromium plated over nickel, with brass or bronze base material (former US equivalent US26D); BHMA A156.18.
3. Use secondary finish in kitchens, bathrooms, and other spaces containing chrome or stainless steel finished appliances, fittings, and equipment; provide primary finish on one side of door and secondary finish on other side if necessary.

PART 3 - EXECUTION

3.01 HARDWARE INSTALLATION

- A. Installation shall be by skilled craftsmen experienced in the installation of commercial builders hardware, and shall be in accordance with the approved shop drawings of sections 081113, Hollow Metal Doors and Frames, 081416 Flush Wood Doors, 081436 Exterior Stile and Rail Doors, 082640 Sliding Wood and Glass Doors and 084113 Aluminum Entrances and Storefronts. Manufacturer's standard locations shall apply except as otherwise directed by the architect or as required to meet applicable code requirements. Where cutting and fitting are required to install hardware onto or into surfaces that are later to be finished, coordinate removal, storage and reinstallation with the finishing work specified in Division 9 sections. Do not install surface mounted items until finishes have been completed on the substrates involved.
- B. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- C. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- D. Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements specified in Division 7 Section "Joint Sealers"
- E. Weatherstripping and Seals: Comply with manufacturer's instructions and recommendations to the extent installation requirements are not otherwise indicated.
- F. All conduit, wire, wiring, junction boxes and the like shall be furnished and installed by the division 26 or 28 contractor, per the wiring diagrams furnished by the hardware supplier in paragraph 2.17. Power supplies furnished under this section shall be installed by the division 26 contractor. Installation of and connections to communications or access control equipment specified elsewhere are not included as part of this section.

3.02 ADJUSTING, CLEANING AND DEMONSTRATING:

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made. Where hardware is installed more than one month prior to the acceptance or occupancy of a space or area, the installer is to return to the installation during the week prior to the acceptance or occupancy and make a final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for the final operation of the heating and cooling systems. Clean any adjacent surfaces soiled by hardware operation.

- B. Approximately six months after acceptance of hardware in each area, the installer shall return to the project and make any necessary adjustments to the hardware to restore proper operational function of door and hardware. Consult with and instruct Owner's personnel in any recommended additions or maintenance procedures. Replace hardware items that have deteriorated or failed due to faulty design or installation. If there is a hardware problem the installer can not resolve, the finish hardware supplier and a representative of the manufacturer of the product concerned shall be contacted. At a mutually convenient time the installer, the hardware supplier and the manufacturer's representative shall meet at the jobsite to review and try to resolve the problem. This meeting shall be at no charge to the owner or contractor unless the problem is determined to be the result of faulty installation.

3.03 HARDWARE SCHEDULE

- A. Refer to door schedule and related information concerning the following hardware groups. Quantities indicated in any instance are for supplier convenience only and are not guaranteed.
- B. Hardware Groups:
1. Sliding Glass Door
 - a. Interior thumbturn only. No keyed lockset needed.
 - b. Finish: Match sliding glass door frame

END OF SECTION

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PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. Scope of work:
 - 1. Miscellaneous metal framing for wall bracing.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
- B. Shop drawings: Indicated details required for proper installation including gauges, typical cross sections, connection and fasteners to structure, fasteners, lateral bracing, and components not indicated by Product Data submittal.
- C. Product Data: Manufacturer's published literature including each type of metal stud framing system and accessory. Show compliance with Specifications.

1.04 QUALIFICATIONS

- A. Manufacturer: Company specializing in work of this section.
- B. Installer: company specializing in work of this section.
 - 1. Recommended by the Northwest Wall and Ceiling Bureau.

PART 2 - PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. Listed manufactures are approved upon condition of satisfactory submittals referencing design requirements:
 - 1. Angeles Metal System (206) 852-3980
 - 2. CEMCO (818) 369-3564
 - 3. Knorr Steel Framing systems (503) 371-8033
 - 4. Steeler, Inc. (206) 725-2500
 - 5. Western Metal Lath and Framing systems 1-800-365-5284
 - 6. Clark Dietrich Building Systems
 - 7. Scafco Corporation

2.02 STEEL FRAMING

- A. Comply with ASTM C754 for conditions indicated
- B. Steel Sheet Components: Complying with ASTM C645 requirements for metal and with ASTM A653/A653M, G40 (Z120), hot-dip galvanized zinc coating.
- C. Non-Load Bearing-Light Gauge Framing Members: ASTM C 645, formed from steel meeting requirements of ASTM A 568, Grade 33, galvanized ASTM A 525, G 40, listed ICBO for structural design properties.
- D. Steel Studs and Runners:

1. Minimum Base Metal Thickness: 22 gauge, or as indicated
2. Depth: As indicated
- E. Deep-Leg Deflection Track: ASTM C645 top runner with 2-inch (50.8 mm) deep flanges.
- F. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
 1. Minimum Base Metal Thickness: 22 gauge
- G. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

2.03 STEEL SUSPENDED CEILING AND SOFFIT FRAMING

- A. Components, General: Comply with ASTM c 754 for conditions indicated.
- B. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0624-inch (1.59 mm) diameter wire, or double strand of 0.0475-inch (1.21 mm) diameter wire.
- C. Hanger Attachments to Concrete: As follows:
 1. Anchors: Fabricated from corrosion-resistant materials with holes or loops for attaching hanger wires and capable of sustaining, without failure a load equal to 5 times that imposed by construction as determined by testing according to ASTM 488 by a qualified independent testing agency.
 2. Typed: Post installed, expansion anchor.
- D. Hangers: As follows:
 1. Wire Hangers: ASTM A 641/A 641m, Class 1 zinc coating, soft temper, 0.162-inch (4.12 mm) diameter.
- E. Carrying Channels: cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538-inch (1.37 mm), a minimum ½-inch (12.7 mm) wide flange, with ASTM A653/A653M, G40 (Z120) hot-dip galvanized zinc coating.
 1. Depth: 2-1/2 inches (63.5mm).
- F. Furring Channels (Furring Members): Commercial-steel sheet with ASTM A 643/A653M, G40 (Z120) hot-dip galvanized zinc coating.
 1. Hat-Shaped, Rigid Furring Channels: ASTM C 645, 7/8-inch (22.2 mm) deep.
 - a. Minimum Base Metal Thickness: 0.0209-inch (0.45 mm).
 2. Steel Studs: ASTM C 645.
 - a. Minimum Base Metal Thickness: 0.00209-inch (0.45 mm).
 - b. Depth: 3-5/8 inches (92.1 mm).

PART 3 - EXECUTION

3.01 INSPECTION

- A. Beginning of installation means acceptance of existing surfaces.

3.02 PREPARATION

- A. Protect installed finish work of other trades and surfaces to preclude damage from work of this Section.

3.03 INSTALLATION

- A. Erect work in accordance with Contract Documents, References, Codes, and Manufacturer's instructions. Where in conflict, follow more stringent requirements.
- B. Shimming and Bracing:
 - 1. Shim metal furring to provide true and level surface for application of wallboard.
 - 2. Cross brace chase partitions as recommended by manufacture or approved by Engineer.
 - 3. Laterally braced metal studs with finish system on side only or where finish system does not run full height of studs as, recommended by manufacturer, to meet lateral design loads.
- C. Supplementary Framing and Backing: Install continuous steel channel backing notched between studs. Coordinate with requirements for support of wall mounted items including shelving, plumbing fixtures, mechanical equipment, and other construction as required. Include supplementary framing where necessary to accommodate loading.

END OF SECTION

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PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Guidance for reinstalling:
 - a. Suspended metal grid
 - b. Acoustical ceiling panels

1.03 REFERENCES

- A. CISCA: Ceilings and Interior Systems Contractors Association, 1800 Pickwick Ave., Glenview, Illinois 60028.
- B. ASTM C635 - Metal Suspension Systems for Ceiling Tile and Lay-in Panel Ceilings
- C. ASTM C636 - Installation of Metal Ceiling Suspension Systems for Ceiling Tile and Lay-in Panels.
- D. U.L. Inc.: Underwriter's Laboratory, Inc. 207 East Ohio Street, Chicago, Illinois 60611.
- E. SCS (CPD) - SCS Certified Products; Scientific Certification Systems; current listings at www.scs-certified.com.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacture of ceiling suspension system and ceiling panels.
- B. Installer: Company specializing in applying the work of this Section.

1.05 SUBMITTALS

- A. Submit product data and samples under provisions of Section 01 30 00.
- B. Provide product data for each type of product indicated, and seismic bracing.
- C. Submit manufacturer's installation instructions.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Maintain uniform temperature of minimum 60 degrees F, and humidity of 20 to 40 percent prior to, during, and after installation.

1.07 SEQUENCING/SCHEDULING

- A. Do not install ceiling panels until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Schedule installation of panels after interior wet work is dry.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS - SUSPENSION SYSTEM & ACOUSTICAL PANELS

- A. Armstrong

- B. USG Interiors
- C. Chicago Metallic
- D. Gordon Interior Specialties Division
- E. Substitutions: Under provisions of Section 01 63 00.

2.02 SUSPENSION SYSTEM MATERIALS

- A. Grid: Type 1 (for use with ACT-1)
 - 1. 15/16" Armstrong "Prelude XL"
 - 2. ASTM C635, intermediate duty, non-fire rated exposed tee; components die cut and interlocking.
 - 3. Grid Face: 15/16"
 - 4. Colors: white
- B. Accessories: Stabilizer bars, hold-down clips, splices, and edge moldings required for suspended grid system.
- C. Grid fabrication: hot dipped galvanized
- D. Hanger Wire: Galvanized carbon steel per ASTM C641, soft temper, pre-stretched, yield stress load of at least 3 times design load but not less than; gage as indicated in the drawings.
- E. Perimeter Trim: Provide extruded aluminum trim equal to 'Axiom Perimeter Trim' provided by Armstrong.
 - 1. Profiles: Trim Channel Profile compatible with suspended ceiling system with 2" horizontal legs for attachment to ceiling system and/or 5/8" drywall finish bottom. Includes perimeter edge and reveal pocket as indicated on drawings.
 - 2. Size: As indicated on drawings.
 - 3. Finish: To be selected by Architect from manufacturer's full range.

2.03 SUPPLEMENTAL MATERIALS

- A. Anchoring Devices: Hot-dipped galvanized steel, ASTM A153, Coating Class C and D, screws, bolts, rods, hooks and eyes, and other devices designed for attachment to various types of structural framing systems, including system indicated, for support of ceiling suspension system.
 - 1. Provide tested and certified carrying and pullout capacities, for each device, for not less than 5 times the design load in ASTM C635, Table 1, Direct Hung installations.
- B. Tie Wire not less than 16 gage, ASTM A641 soft temper, Class 1 coating.
- C. Acoustical Sealant: Bostik RTV silicon sealant #9732.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine areas to receive materials for conditions, which will adversely affect installation. Provide written report of discrepancies with copies to Contractor and Architect.
- B. Do not start work until unsatisfactory conditions are corrected. Application or installation of materials constitutes acceptance of supporting construction.

- C. Work to be Concealed: Verify work above ceiling suspension system is complete and installed in manner that will not affect layout and installation of suspension components.
- D. Roof Attachment: Suspension system attachment to existing structural slabs only.

3.02 PREPARATION

- A. Field Dimensions: Verify ceiling layouts by actual field dimensions prior to installation.
- B. Verify actual location of items penetrating ceiling system with approved coordination drawings.

3.03 INSTALLATION, DIRECT HUNG CEILING SUSPENSION SYSTEM

- A. Pursuant to ASTM C636, Cisca published recommendations, and applicable code requirements in force at time of installation.
- B. Pursuant to manufacturer's published instructions, where more stringent than referenced standards specified, or where procedure is not covered by referenced standards.
- C. Allowable deflection of main runners and cross runners is limited to 1/360 of the span between supports pursuant to ASTM C635.
- D. Support system independent of walls, columns, ducts, pipes, and conduit. Maintain face plane with adjacent members, when splicing carrying tees.
- E. Use properly placed and suspended load carrying framing channels to maintain hanger spacing and vertical position when interrupted by mechanical ducts and other horizontally run equipment.
- F. Center suspended ceiling grid on room axis to allow equal border units, with no units less than one-half width unless otherwise shown on Drawings.
- G. Provide top mounted cross-locking spacer bars for linear installations.
- H. System Loads:
 - 1. When weight of components supported on main runners or cross runners causes total dead load to exceed deflection capability, provide additional hangers located with 6 in. of each corner, unless otherwise recommended by manufacturer, or support components independently.
- I. Do not apply system loads that may result in rotation of runners.
- J. Cross tees supported by main tees to have identical load carrying capacities of main tees.
- K. Seismic Restraints: Apply seismic restraints to ceiling suspension systems pursuant to ASTM E580, local governing codes, and ordinances.
- L. Install wall molding at intersection of ceiling and vertical surfaces, using longest practical lengths. Firmly secure moldings to walls with corners neatly mitered.
- M. Where circular or radius penetrations occur, provide preformed closures to match edge moldings.
- N. Install expansion joint devices pursuant to manufacturer's recommendations.
- O. No tiles under 1/2 tile shall be permitted without express approval.

3.04 TOLERANCES

- A. Maintain tolerances specified in ASTM C635 and C636.

3.05 CLEANING AND PROTECTION

- A. Upon completion of the Work, remove all unused materials, debris, containers, and equipment from the project site. Clean and repair floors, walls, and other surfaces that have been stained, marred, or otherwise damaged by work under this Section.
- B. Protect acoustical ceiling panels during the construction period so that they will be without any deterioration or damage at the time of acceptance by Owner.

3.06 MAINTENANCE STOCK

- A. Furnish one sealed carton of each type of suspended acoustical tile to the Owner.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes surface preparation and field painting of the following:
 - 1. Exposed interior items and surfaces
 - 2. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- B. Scope of work: Paint all exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color of finish, the Architect will select from standard colors and finishes available.
 - 1. General: Painting includes field painting of exposed pipes and ducts, hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment in finished area of building.
 - 2. The following items are to receive field applied paint coatings:
 - a. New and existing GWB on partition walls
 - b. Hollow metal frames
 - c. Existing wood & metal doors
 - d. Previously painted acoustical ceiling tiles
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels (unless specifically noted otherwise)
 - 1. Prefinished items include the following factory-finished components:
 - a. Architectural woodwork and casework.
 - b. Light fixtures.
 - 2. Finished metal surfaces include the following:
 - a. Anodized aluminum.
 - b. Stainless steel.
 - c. Chromium plate.
 - d. Bronze and brass.
 - 3. Operating parts include moving parts of operating equipment and the following:
 - 4. Valve and damper operators.
 - a. Linkages.
 - b. Sensing devices.
 - c. Motor and fan shafts.

5. Labels: Do not paint over Underwriters laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
- D. Related Sections include the following:
1. Section 06 41 00 Architectural Wood Casework
 2. Section 08 11 00 Steel Doors and Frames for shop priming steel doors and frames
 3. Section 08 30 00 Special Doors
 4. Section 09 26 00 Gypsum Board Assemblies for surface preparation for gypsum board. (Work on under this section is field painted)
 5. Division 23 and 26: Painting of mechanical and electrical work.

1.03 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
 2. Eggshell refers to low-sheen finish with a gloss range between 5 and 20 when measured at a 60-degree meter.
 3. Satin refers to a low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.
 4. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.
 5. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

1.04 SUBMITTALS

- A. Product Data: For each paint system specified. Include block fillers and primers.
1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 2. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
- B. Samples for Initial Selection (for colors not presently scheduled): Manufacturer's color charts showing the full range of colors available for each type of finish-coat material indicated.
1. After color selection, the Architect will furnish color chips for surfaces to be coated.
- C. Samples for Verification (for colors scheduled): Of each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
 2. Provide a list of materials and applications for each coat of each sample. Label each sample for location and application.

- D. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.05 QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

1.06 SOURCE LIMITATIONS: OBTAIN BLOCK FILLERS, PRIMERS, AND UNDERCOAT MATERIALS FOR EACH COATING SYSTEM FROM THE SAME MANUFACTURER AS THE FINISH COATS.

- A. Product Content: Provide products that comply with requirements for VOC levels per Section 01 81 13.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number and date of manufacture.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F (7°C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.08 PROJECT CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90°F (10 and 32°C).

1.09 APPLY SOLVENT-THINNED PAINTS ONLY WHEN THE TEMPERATURE OF SURFACES TO BE PAINTED AND SURROUNDING AIR TEMPERATURES ARE BETWEEN 45 AND 95°F (7.2 AND 35°C).

- A. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5°F (3°C) above the dewpoint; or to damp or wet surfaces.
 - 1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the manufacturer during application and drying periods.

1.10 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied in the quantities described below. Package paint materials in unopened, factory-sealed containers for storage and identify with labels describing contents. Deliver extra materials to the Owner.
 - 1. Quantity: Furnish the Owner with an additional 5 percent, but not less than 1 gal. (3.785 L) or 1 case, as appropriate, of each material and color applied.

1.11 WARRANTY

- A. Provide two-year warranty.

1.12 REFERENCES

1.13 40 CFR 59, SUBPART D - NATIONAL VOLATILE ORGANIC COMPOUND EMISSION STANDARDS FOR ARCHITECTURAL COATINGS; U.S. ENVIRONMENTAL PROTECTION AGENCY; CURRENT EDITION.

- A. USGBC LEED-NC - LEED Green Building Rating System for New Construction and Major Renovations; U.S. Green Building Council; 2009.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products in the paint schedules.
- B. Manufacturers Names: The following manufacturers are referred to in the paint schedules by use of shortened versions of their names, which are shown in parentheses:
 - 1. Benjamin Moore & Co. (Moore).
 - 2. Sherwin-Williams Co. (S-W).
 - 3. Fuller-O'Brien Paints (Fuller).
 - 4. Kelly Moore
 - 5. Parker Paint Co.

2.02 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrate indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.
- C. Colors: Match colors indicated by reference to manufacturer's color designations.
- D. Volatile Organic Compound (VOC) Content:

1. Provide coatings that comply with the most stringent requirements specified in the following.
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. USGBC LEED Rating System, edition as stated in Section 01 3515; for interior wall and ceiling finish (all coats), anti-corrosive paints on interior ferrous metal, clear wood stains and finishes, sanding sealers, other sealers, shellac, and floor coatings.
 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- E. Chemical Content: The following compounds are prohibited:
1. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
 2. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2- dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas and conditions, with the Applicator present, under which painting will be performed for compliance with application requirements.
1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
1. Notify the Architect about anticipated problems using the materials specified over substrates primed by others

3.02 PREPARATION

- A. General: Remove hardware and hardware accessories, plate, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning.
- C. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

- D. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime.
 2. Cementitious Materials: Prepare concrete surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Rough as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - a. Use abrasive blast-cleaning methods if recommended by paint manufacturer.
 - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces where moisture contents exceeds that permitted in manufacturer's written instructions.
 3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling.
 - c. When transparent finish is required, backprime with spar varnish.
 - d. Backprime paneling on interior partitions where masonry, plaster, or other wall construction occurs on backside.
 - e. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
 4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.
 - a. Clean steel surfaces as recommended by paint system manufacturer and according to requirements of SSPC-SP 6.
 - b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 - c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.
 5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- E. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
-

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
3. Use only thinners approved by paint manufacturer and only within recommended limits.

3.03 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
 1. Paint colors, surface treatments, and finishes are indicated in the schedules.
 2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 3. Provide finish coats that are compatible with primers used.
 4. The term 'exposed surfaces' includes areas visible when permanent or built-in fixtures, convector covers, covers for finned-tube radiation, grilles, and similar
 - a. components are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.
 5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before the final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
 7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
 8. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
 9. Sand lightly between each succeeding enamel or varnish coat
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions sand between applications.
 2. Omit primer on metal surfaces that have been shop primed and touchup painted.
 3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
 - 1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.
 - 2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
 - 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required. SPRAY APPLICATION IS NOT ALLOWED BY THE PORT OF TACOMA
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.
- E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in occupied spaces
 - 1. Mechanical items to be painted include, but are not limited to, the following:
 - a. Piping, pipe hangers, and supports.
 - b. Ductwork.
 - c. Insulation.
 - d. Motors and mechanical equipment.
 - e. Accessory items.
 - 2. Electrical items to be painted include, but are not limited to, the following:
 - a. Conduit and fittings
 - b. Switchgear.
 - c. Panel boards.
- F. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.
- G. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- H. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.04 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

3.05 PROTECTION

3.06 PROTECT WORK OF OTHER TRADES, WHETHER BEING PAINTED OR NOT, AGAINST DAMAGE BY PAINTING. CORRECT DAMAGE BY CLEANING, REPAIRING OR REPLACING, AND REPAINTING, AS APPROVED BY ARCHITECT.

- A. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
- B. At the completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.07 PAINT GLOSS SCHEDULE

- A. See the Drawings for the locations of the following paint colors:
 - 1. GWB walls: eggshell (two coats)
 - 2. Hollow metal doors and frames: satin (two coats)
 - 3. Ceilings: eggshell (two coats)
 - 4. Woodwork: satin (two coats)

3.08 INTERIOR PAINT SCHEDULE

3.09 GYPSUM BOARD: PROVIDE THE FOLLOWING FINISH SYSTEMS OVER INTERIOR GYPSUM BOARD SURFACES:

- 1. Low-Luster, Acrylic-Enamel Finish: 2 finish coats over a primer.
 - a. Primer: Latex-based, interior primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils (0.031 mm).
 - b. First and Second Coats: Low-luster (eggshell), acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.8 mils (0.071 mm).
- B. Ferrous Metal: Provide the following finish systems over ferrous metal:
 - 1. Low luster (satin) Finish: One finish coat over an enamel undercoat and a primer.
 - a. Primer: Quick-drying, rust-inhibitive, alkyd-based or epoxy-metal primer as recommended by the manufacturer for this substrate, applied at spreading rate to achieve a total dry film thickness of not less than 1.5 mils (0.038 mm).
 - b. Undercoat: Alkyd, interior enamel undercoat, acrylic-latex, interior enamel as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.3 mils (0.033 mm).
 - c. Finish Coat: Eggshell, acrylic-latex interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.3 mils (0.033 mm).
- C. Zinc-Coated Metal: Provide the following finish systems over zinc-coated metal:
 - 1. Low luster (satin), Acrylic-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Galvanized metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils (0.031 mm).

- b. First and Second Coats: Acrylic-latex, interior enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils (0.066).
- D. Concrete Substrates, Nontraffic Surfaces
- E. Low luster (flat) Finish: 1 Coat over a prime coat.
 - a. Prime Coat: Interior latex matching topcoat.
 - b. Topcoat: Interior latex, flat
- F. Woodwork with clear finish
 - 1. Low luster (satin), Crystal Clear Polycrylic Finish: Two finish coats over a sanding sealer.
 - a. Sanding Sealer: Applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.2 mils (0.031 mm).
 - b. First and Second Coats: Applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils (0.066).

END OF SECTION

APPENDIX A

PORT OF TACOMA

CONSTRUCTION SWPPP

SHORT FORM

CONSTRUCTION SWPPP SHORT FORM

The threshold for using the Port of Tacoma's (Port) short form is a project that proposes to clear or disturb less than one acre of land. Projects falling within this threshold may use this short form instead of preparing a professionally designed Construction Stormwater Pollution Prevention Plan (SWPPP). If project disturbance quantities exceed this threshold, you must prepare of formal Construction SWPPP as part of your submittal package. If your project is within the threshold and includes—or may affect—a critical area, please contact the Port to determine if the SWPPP short form may be used.

CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN SHORT FORM

Project Name:

Address:

Contact/Owner:

Phone:

Erosion Control Supervisor:

Phone:

Cell:

Pager:

Emergency (After hours) Contact:

Phone:

Permit No.:

Parcel No.:

Required Submittals

A Construction SWPPP consists of both a project narrative and a site plan. The project narrative describes existing conditions on the site, the proposed conditions, and how construction site runoff will be managed until final site stabilization is achieved. Any additional relevant information should be included in the project narrative. All Best Management Practices (BMPs) that will be utilized onsite must be included as part of the project narrative and provided (electronically or hard copy) as part of the submittal package. If additional BMPs beyond those included in the Washington Department of Ecology's (Ecology) Western Washington Stormwater Management Manual (Ecology SWMM) or the City of Tacoma's (City) Stormwater Management Manual (City SWMM) are proposed to be used, a narrative and appropriate details describing the BMP (its function, installation method, and maintenance activities) will be required.

The site plan is a drawing which shows the location of the proposed BMPs to control erosion and sedimentation during and after construction activities.

The City's govMe site (<http://www.govme.org>) may be used to find much of the information needed to complete this form, such as adjacent areas, topography, critical areas, the downstream drainage path, and information concerning onsite features.

PROJECT NARRATIVE

The Construction SWPPP Short Form narrative must be completed at part of the submittal package. Any information described, as part of the narrative, should also be shown on the site plan.

Note: From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted by special authorization from the Port.

A. Project Description (Check all that apply)

- ☐ New Structure ☐ Building Addition ☐ Grading/Excavation
☐ Paving ☐ Utilities ☐ Other:

1. Total project area _____ (square feet)
 2. Total proposed impervious area _____ (square feet)
 3. Total existing impervious area _____ (square feet)
 4. Total proposed area to be disturbed _____ (square feet)
 5. Total volume of cut/fill _____ (cubic yards)

Additional Project Information:

B. Existing Site Conditions (Check all that apply)

1. Describe the existing vegetation on the site. (Check all that apply)
☐ Forest ☐ Pasture/field grass ☐ Pavement ☐ Landscaping ☐ Brush
☐ Trees ☐ Other:
2. Describe how surface water (stormwater) drainage flows across/from the site. (Check all that apply)
☐ Sheet Flow ☐ Gutter ☐ Catch Basin ☐ Ditch/Swale ☐ Storm Sewer
☐ Stream ☐ Other:
3. Describe any unusual site condition(s) or other features of note.
☐ Steep Grades ☐ Large depression ☐ Underground tanks ☐ Springs
☐ Easements ☐ Existing structures ☐ Existing utilities ☐ Other:

C. Adjacent Areas (Check all that apply)

1. Check any/all adjacent areas that may be affected by site disturbance and fully describe below in item 2:
- ☐ Streams* ☐ Lakes* ☐ Wetlands* ☐ Steep slopes*
☐ Residential Areas ☐ Roads ☐ Ditches, pipes, culverts ☐ Other:

** If the site is on or adjacent to a critical area (e.g., waterbody), the Port may require additional information, engineering, and other permits to be submitted with this short form.*

2. Describe how and where surface water enters the site from properties located upstream:

3. Describe the downstream drainage path from the site to the receiving body of water (minimum distance of 0.25 mile [1320 feet]). (E.g., water flows from the site into a curb-line, then to a catch basin at the intersection of X and Y streets. A 10-inch pipe system conveys water another 1000 feet to a wetland.) Include information on the condition of the drainage structures.

D. Soils (Check all that apply)

The intent of this section is to identify when additional soils information may be required for applicants using this short form. There are other site-specific issues that may necessitate a soils investigation or more extensive erosion control practices. The Port will determine these situations on a case-by-case basis as part of their review.

1. Does the project propose infiltration? Infiltration systems require prior Port approval.

☐ Yes ☐ No

2. Does the project propose construction on or near steep slopes (15% or greater)?

☐ Yes ☐ No

If infiltration is proposed for the site or steep slopes (15% or greater) have been identified, the Port will require soils information as part of project design. The applicant must contact a soil professional or civil engineer that specializes in soil analysis and perform an in-depth soils investigation. If the Yes box is checked for either question, the Port may not permit the use of this short form.

E. Construction Sequencing/Phasing

1. Construction sequence: the standard construction sequence is as follows:
 - Mark clearing/grading limits.
 - Install initial erosion control Best Management Practices (BMPs) (e.g., construction entrance, silt fence, catch basin inserts, etc.).
 - Clear, grade, and fill project site as outlined in the site plan while implementing and maintaining proper temporary erosion and sediment control BMPs simultaneously.
 - Install permanent erosion protection as described in the specifications (e.g., impervious surfaces, landscaping, etc.).
 - Remove temporary erosion control methods as permitted. Do not remove temporary erosion control until permanent erosion protection is fully established.

List any changes from the standard construction sequence outlined above:

2. Construction phasing: if construction is going to occur in separate phases, please describe:

F. Construction Schedule

1. Provide a proposed construction schedule (dates construction starts and ends, and dates for any construction phasing.)

Start Date:

End Date:

Interim Phasing Dates:

Wet Season Construction Activities: Wet season occurs from October 1 to April 30. Please describe construction activities that will occur during this time period.

Note: Additional erosion control methods may be required during periods of increased surface water runoff.

2. Site plan

A site plan, to scale, must be included with this checklist that shows the following items:

- ☐ a. Address, Parcel Number, Permit Number, and Street Names
- ☐ b. North Arrow
- ☐ c. Indicate boundaries of existing vegetation (e.g., tree lines, grassy areas, pasture areas, fields, etc.)
- ☐ d. Identify any onsite or adjacent critical areas and associated buffers (e.g., wetlands, steep slopes, streams, etc.).
- ☐ e. Identify any FEMA base flood boundaries and Shoreline Management boundaries.
- ☐ f. Show existing and proposed contours.
- ☐ g. Delineate areas that are to be cleared and/or graded.
- ☐ h. Show all cut and fill slopes, indicating top and bottom of slope catch lines.
- ☐ i. Show locations where upstream run-on enters the site and locations where runoff leaves the site.
- ☐ j. Indicate existing surface water flow direction(s).
- ☐ k. Label final grade contour and indicate proposed surface water flow direction and surface water conveyance systems (e.g., pipes, catch basins, ditches, etc.).
- ☐ l. Show grades, dimensions, and direction of flow in all (existing and proposed) ditches, swales, culverts, and pipes.
- ☐ m. Indicate locations and outlets of any dewatering systems (usually to sediment trap).
- ☐ n. Identify and locate all erosion control methods to be used during and after construction.

ONSITE FIELD VERIFICATION OF ACTUAL CONDITIONS IS REQUIRED.

Figure 1. (see page 5 for Site Plan requirements)

GUIDELINES FOR EROSION CONTROL ELEMENTS

This SWPPP must contain the 12 required elements, as required by Ecology. Check off each element as it is addressed in the SWPPP short form and/or on your site plan.

- ☐ 1. Mark Clearing Limits
- ☐ 2. Establish Construction Access
- ☐ 3. Control Flow Rates
- ☐ 4. Install Sediment Controls
- ☐ 5. Stabilize Soils
- ☐ 6. Protect Slopes
- ☐ 7. Protect Drain Inlets
- ☐ 8. Stabilize Channels and Outlets
- ☐ 9. Control Pollutants
- ☐ 10. Control Dewatering
- ☐ 11. Maintain BMPs
- ☐ 12. Manage the Project

The following is a brief description of each of the 12 required elements of a SWPPP. If an element does not apply to the proposed project site, please describe why the element does not apply. Applicable BMPs are listed with each element and in Table 1. Please note that this list is not a comprehensive list of BMPs available for small construction projects, but erosion and sediment control techniques most pertinent to small construction sites are included here. More detailed information on construction BMPs can be found in Ecology's SWMM Volume II and the City's SWMM Volume II (Ecology 2019; City of Tacoma 2016). Please provide hard copies of the BMPs that will be used for the project and include as part of this Construction SWPPP. BMPs that may be used if needed can be noted as being contingent in the event additional erosion control is needed. Describe any additional BMPs that will be utilized onsite and add them to the SWPPP short form.

For phased construction projects, clearly indicate erosion control methods to be used for each phase of construction.

Element #1 – Mark Clearing Limits

All construction projects must clearly mark any clearing limits, sensitive areas and their buffers prior to beginning any land disturbing activities, including clearing and grading. Clearly mark the limits both in the field and on the site plans. Limits shall be marked in such a way that any trees or vegetation that is to remain will not be harmed.

Applicable BMPs include:

- BMP C101: Preserving Natural Vegetation
- BMP C102: Buffer Zones
- BMP C103: High Visibility Plastic or Metal Fence
- BMP C104: Stake and Wire Fence

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #2 – Establish Construction Access

All construction projects subject to vehicular traffic shall provide a means of preventing vehicle “tracking” soil from the site onto streets or neighboring properties. Limit vehicle traffic on- and off-site to one route if possible. All access points shall be stabilized with a rock pad construction entrance or other Port-approved BMP. The applicant should consider placing the entrance in the area for future driveway(s), as it may be possible to use the rock as a driveway base material. The entrance(s) must be inspected weekly, at a minimum, to ensure no excess sediment buildup or missing rock.

Applicable BMPs include:

- BMP C105: Stabilized Construction Entrance
- BMP C106: Wheel Wash
- BMP C107: Construction Road/Parking Area Stabilization

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #3 – Control Flow Rates

Protect properties and waterways downstream of the project site from erosion due to increases in volume, velocity, and peak flow of stormwater runoff from the project site.

Permanent infiltration facilities shall not be used for flow control during construction unless specifically approved by the Environmental Department. Sediment traps can provide flow control for small sites by allowing water to pool and allowing sediment to settle out of the water.

Applicable BMPs include:

- BMP C207: Check Dams
- BMP C240: Sediment Trap

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element 4 – Install Sediment Controls

Surface water runoff from disturbed areas must pass through an appropriate sediment removal device prior to leaving a construction site or discharging into a waterbody. Sediment barriers are typically used to slow stormwater sheet flow and allow the sediment to settle out behind the barrier.

Sediment controls must be installed/constructed prior to site grading.

Applicable BMPs include:

- BMP C208: Triangular Silt Dike
- BMP C232: Gravel Filter Berm
- BMP C233: Silt Fence
- BMP C235: Straw Wattles

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #5 – Stabilize Soils

Stabilize exposed and unworked soils by applying BMPs that protect the soils from raindrop impact, flowing water, and wind.

From October 1 through April 30, no soils shall remain exposed or unworked for more than 2 days. From May 1 to September 30, no soils shall remain exposed or unworked for more than 7 days. This applies to all soils whether at final grade or not.

Applicable BMPs include:

- BMP C120: Temporary and Permanent Seeding
- BMP C121: Mulching
- BMP C122: Nets and Blankets
- BMP C123: Plastic Covering
- BMP C140: Dust Control

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #6 – Protect Slopes

Protect slopes by diverting water at the top of the slope. Reduce slope velocities by minimizing the continuous length of the slope.

Applicable BMPs include:

- BMP C200: Interceptor Dike and Swale
- BMP C204: Pipe Slope Drains
- BMP C207: Check Dams

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #7 – Protect Drain Inlets

All operable storm drain inlets must be protected during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment. Install catch basin protection on all catch basins within 500 feet downstream of the project.

Applicable BMPs include:

- BMP C220: Storm Drain Inlet Protection

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #8 – Stabilize Channels and Outlets

Stabilize all temporary onsite conveyance channels. Provide stabilization to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the conveyance system outlets.

Applicable BMPs include:

- BMP C202: Channel Lining
- BMP C209: Outlet Protection

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #9 – Control Pollutants

Handle and dispose of all pollutants, including demolition debris and other solid wastes in a manner that does not cause stormwater contamination. Provide cover and containment for all chemicals, liquid products (including paint), petroleum products, and other materials. Handle all concrete and concrete waste appropriately.

Applicable BMPs include:

- BMP C150: Materials on Hand
- BMP C151: Concrete Handling
- BMP C152: Sawcutting and Surface Pollution Prevention
- BMP C153: Material Delivery, Storage and Containment

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #10 – Control Dewatering

Clean, non-turbid dewatering water, such as groundwater, can be discharged to the stormwater system provided the dewatering flow does not cause erosion or flooding of receiving waters. All other dewatering water shall be pumped to a settling container and taken offsite or discharged to the City sewer system. All discharges to the City sewer system require City approval, which may include a Special Approved Discharge (SAD) permit.

Applicable BMPs include:

- BMP C150: Materials on Hand

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #11 – Maintain BMPs

Maintain and repair temporary erosion and sediment control BMPs as needed. Inspect all BMPs at least weekly and after every storm event.

Remove all temporary erosion and sediment control BMPs within 30 days after final site stabilization or if the BMP is no longer needed. Any sediment trapped during construction activities should be removed or stabilized onsite. No sediment shall be discharged into the stormwater drainage system or any natural conveyance system (e.g., streams).

Applicable BMPs include:

- BMP C160: Certified Erosion and Sediment Control Lead

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #12 – Manage the Project

Phase development projects to prevent soil erosion and the transport of sediment from the project site during construction. Coordinate all work prior initial construction with subcontractors and other utilities to ensure no areas are worked prematurely.\

A designated erosion and sediment control person is required for all construction projects. This person is responsible for ensuring that the project's erosion and sediment control BMPs are appropriate for the site and are functioning properly. They are also responsible for updating the

SWPPP as necessary as site conditions warrant. They must be available 24 hours a day to ensure compliance.

Applicable BMPs include:

- BMP C160: Certified Erosion and Sediment Control Lead
- BMP C162: Scheduling
- BMP C180: Small Project Construction Stormwater Pollution Prevention

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Table 1. Applicable BMPs for the 12 Elements of a SWPPP

Element #1 – Mark Clearing Limits		
BMP C101	Preserving Natural Vegetation	
BMP C102	Buffer Zones	
BMP C103	High Visibility Plastic and Wire Fence	
BMP C104	Stake and Wire Fence	
Element #2 – Establish Construction Entrance		
BMP C105	Stabilized Construction Entrance	
BMP C106	Wheel Wash	
BMP C107	Construction Road/Parking Area Stabilization	
Element #3 – Control Flow Rates		
BMP C207	Check Dams	
BMP C240	Sediment Trap	
Element #4 – Install Sediment Controls		
BMP C208	Triangular Silt Trap	
BMP C232	Gravel Filter Berm	
BMP C233	Silt Fence	
BMP C235	Straw Wattles	
Element #5 – Stabilize Soils		
BMP C120	Temporary and Permanent Seeding	
BMP C121	Mulching	
BMP C122	Nets and Blankets	
BMP C123	Plastic Covering	
BMP C140	Dust Control	
Element #6 – Protect Slopes		
BMP C200	Interceptor Dike and Swale	
BMP C204	Pipe Slope Drains	
BMP C207	Check Dams	
Element #7 – Protect Drain Inlets		
BMP C220	Storm Drain Inlet Protection	
Element #8 – Stabilize Channels and Outlets		
BMP C202	Channel Lining	
BMP C209	Outlet Protection	
Element #9 – Control Pollutants		
BMP C150	Materials on Hand	

Element #9 – Control Pollutants, cont.		
BMP C151	Concrete Handling	
BMP C152	Sawcutting and Surfacing Pollution Prevention	
BMP C153	Materials, Delivery, Storage and Containment	
Element #10 – Control Dewatering		
BMP C150	Materials on Hand	
Element #11 – Maintain BMPs		
BMP C160	Certified Erosion and Sediment Control Lead	
Element #12 – Manage the Project		
BMP C160	Certified Erosion and Sediment Control Lead	
BMP C162	Scheduling	
BMP C180	Small Project Construction Stormwater Pollution Prevention	

REFERENCES

City of Tacoma. 2016. Stormwater Management Manual 2016 Edition. Public Works/ Environmental Services, Maintenance Division, Tacoma, Washington.

Washington State Department of Ecology (Ecology). 2019. Stormwater Management Manual for Western Washington. Water Quality Program, Lacey, Washington.

APPENDIX B

PHASE 1 CONSTRUCTION

RESTART COVID-19 JOB SITE

REQUIREMENTS

Phase 1 Construction Restart

COVID-19 Job Site Requirements

Phase 1: Low-risk construction work resumes.

Any existing construction projects complying with the points below may resume only those work activities that do not require workers to be closer than six-feet together. If a work activity requires workers to be closer than six-feet, it is not considered low-risk and is not authorized. Adherence to the physical distancing requirement and the health and safety points below will be strictly enforced.

Prior to recommencing work all contractors are required to develop and post at each job site a comprehensive COVID-19 exposure control, mitigation, and recovery plan. The plan must include policies regarding the following control measures: PPE utilization; on-site social distancing; hygiene; sanitation; symptom monitoring; incident reporting; site decontamination procedures; COVID-19 safety training; exposure response procedures; and a post-exposure incident project wide recovery plan. A copy of the plan must be available on each job site during any construction activities and available for inspection by state and local authorities. Failure to meet posting requirements will result in sanctions, including the job being shut down.

All Contractors are required to post at each job site written notice to employees, subcontractors and government officials the Phase 1 work that will be performed at that job site and signed commitment to adhere to the requirements listed in this document.

All contractors have a general obligation to keep a safe and healthy worksite in accordance with state and federal law. Failure to follow these requirements will be considered a violation of these duties and be penalized accordingly. Under RCW 49.17.060, “each employer shall furnish to each of their employees a place of employment free from recognized hazards that are causing or likely to cause serious injury or death to his or her employees and shall comply with the rules, regulations, and orders promulgated under this chapter.” The Washington State Department of Labor & Industries’ Division of Occupational Safety and Health (DOSH) is responsible for workplace safety and health, including inspections and enforcement, consultation, technical assistance, training, education and grants.

All contractors are also required to comply with the following COVID-19 worksite-specific safety practices, as outlined in Gov. Jay Inslee’s “Stay Home, Stay Healthy” Proclamation 20-25, and in accordance with the Washington State Department of Labor & Industries General Coronavirus Prevention Under Stay Home-Stay Healthy Order (DOSH Directive 1.70: <https://www.lni.wa.gov/safety-health/safety-rules/enforcement-policies/DD170.pdf>) and the Washington State Department of Health Workplace and Employer Resources & Recommendations at <https://www.doh.wa.gov/Coronavirus/workplace>:

COVID-19 Site Supervisor

1. A site-specific COVID-19 Supervisor shall be designated by the contractor at every job site to monitor the health of employees and enforce the COVID-19 job site safety plan. A designated COVID-19 Supervisor must be present at all times during construction activities, except on single-family residential job sites with 6 or fewer people on the site.

COVID-19 Safety Training

2. A Safety Stand-Down/toolbox talk/tailgate training must be conducted on all job sites on the first day of returning to work, and weekly thereafter, to explain the protective measures in place for all workers. Social distancing must be maintained at all gatherings.
3. Attendance will be communicated verbally and the trainer will sign in each attendee.
4. COVID-19 safety requirements shall be visibly posted on each jobsite.

Social Distancing

5. Social distancing of at least 6 feet of separation must be maintained by every person on the worksite at all times.
6. Gatherings of any size must be precluded by taking breaks and lunch in shifts. Any time two or more persons must meet, ensure minimum 6 feet of separation.
7. Identify “choke points” and “high-risk areas” on job sites where workers typically congregate and control them so social distancing is always maintained.
8. Minimize interactions when picking up or delivering equipment or materials, ensure minimum 6-foot separation.
9. To the extent practical allow only one trade/subcontractor at a time on a jobsite and maintain 6-foot separation social distancing for each member of that trade. If more than one trade/subcontractor must be on the job to complete the job then at a minimum all trades and subcontractors must maintain social distancing policies in accordance with this guidance.

Personal Protective Equipment (PPE) – Employer Provided

10. Provide personal protective equipment (PPE) such as gloves, goggles, face shields and face masks as appropriate, or required, for the activity being performed.
11. Masks, in accordance with Washington Department of Health guidelines, or as required by Washington Department of Labor & Industries (L&I) safety rules, must be worn at all times by every employee on the worksite.
12. Eye protection must be worn at all times by every employee while on worksite.
13. Gloves must be worn at all times by every employee while on worksite. The type of glove worn should be appropriate to the task. If gloves are not typically required for the task, then any type of glove is acceptable, including latex gloves.
14. If appropriate PPE cannot be provided, the worksite must be shut down.

Sanitation and Cleanliness

15. Soap and running water shall be abundantly provided on all job sites for frequent handwashing. Workers should be encouraged to leave their workstations to wash their hands regularly, before and after going to the bathroom, before and after eating and after coughing, sneezing or blowing their nose.
16. When running water is not available, portable washing stations, with soap, are required, per WAC 296-155-140 2(a) – (f). Alcohol-based hand sanitizers with greater than 60% ethanol or 70% isopropanol can also be used, but are not a replacement for the water requirement.
17. Post, in areas visible to all workers, required hygienic practices, including not to touch face with unwashed hands or with gloves; washing hands often with soap and water for at least 20 seconds; use hand sanitizer with at least 60% alcohol; cleaning and disinfecting frequently touched objects and surfaces such as workstations, keyboards, telephones, handrails, machines, shared tools, elevator control buttons, and doorknobs; covering the mouth and nose when coughing or sneezing as well as other hygienic recommendations by the U.S. Centers for Disease Control (CDC).
18. Make disinfectants available to workers throughout the worksite and ensure cleaning supplies are frequently replenished.
19. Frequently clean and disinfect high-touch surfaces on job sites and in offices, such as shared tools, machines, vehicles and other equipment, handrails, doorknobs, and portable toilets. If these areas cannot be cleaned and disinfected frequently, the jobsite shall be shut down until such measures can be achieved and maintained.
20. When the worksite is an occupied home, workers should sanitize work areas upon arrival, throughout the workday and immediately before they leave, and occupants should keep a personal distance of at least 10 feet.
21. If an employee reports feeling sick and goes home, the area where that person worked should be immediately disinfected.

Employee Health/Symptoms

22. Create policies which encourage workers to stay home or leave the worksite when feeling sick or when they have been in close contact with a confirmed positive case. If they develop symptoms of acute respiratory illness, they must seek medical attention and inform their employer.
23. Have employees inform their supervisors if they have a sick family member at home with COVID-19. If an employee has a family member sick with COVID-19, that employee must follow the isolation/quarantine requirements as established by the State Department of Health.
24. Screen all workers at the beginning of their shift by taking their temperature and asking them if they have a fever, cough, shortness of breath, fatigue, muscle aches, or new loss of taste or smell. Thermometers used shall be 'no touch' or 'no contact' to the greatest extent possible. If a 'no touch' or 'no contact' thermometer is not available, the thermometer must be properly sanitized between each use. Any worker with a temperature of 100.4°F or higher is considered to have a fever and must be sent home.

25. Instruct workers to report to their supervisor if they develop symptoms of COVID-19 (e.g., fever, cough, shortness of breath, fatigue, muscle aches, or new loss of taste or smell). If symptoms develop during a shift, the worker should be immediately sent home. If symptoms develop while the worker is not working, the worker should not return to work until they have been evaluated by a healthcare provider.
26. Failure of employees to comply will result in employees being sent home during the emergency actions.
27. Employees who do not believe it is safe to work shall be allowed to remove themselves from the worksite and employers must follow the expanded family and medical leave requirements included in the Families First Coronavirus Response Act or allow the worker to use unemployment benefits, paid time off, or any other available form of paid leave available to the worker at the workers discretion.
28. Any worker coming to work on a construction site in Washington from any state that is not contiguous to Washington must self-quarantine for 14 days to become eligible to work on a job site in Washington.
29. If an employee is confirmed to have COVID-19 infection, employers should inform fellow employees of their possible exposure to COVID-19 in the workplace but maintain confidentiality as required by the Americans with Disabilities Act (ADA). The employer should instruct fellow employees about how to proceed based on the CDC [Public Health Recommendations for Community-Related Exposure](#).

Job Site Visitors

30. A daily attendance log of all workers and visitors must be kept and retained for at least four weeks. The log must include the name, phone number, and email address of all workers and visitors.

No jobsite may operate until the contractor can meet and maintain all requirements, including providing materials, schedules and equipment required to comply.

These Phase 1 COVID-19 job site safety practices are required as long as the “Stay Home, Stay Healthy” Gubernatorial Proclamation 20-25 is in effect or if adopted as rules by a federal, state or local regulatory agency. **All items minus numbers 28 and 30 are subject to enforcement action under L&I’s Division of Occupational Safety and Health (DOSH).**

Workplace safety and health complaints may be submitted to the L&I Call Center: (1-800-423-7233) or via e-mail to adag235@lni.wa.gov. **General questions about how to comply with construction safety practices** can be submitted to the state’s Business Response Center at <https://app.smartsheet.com/b/form/2562f1caf5814c46a6bf163762263aa5>. **All other violations related to Proclamation 20-25** can be submitted via at: <https://bit.ly/covid-compliance>.

APPENDIX C

City of Tacoma Commercial Alteration Permit BLDCA22- 0031

City of Tacoma Reviewed Plan Set can be downloaded from
[https://www.portoftacoma.com/business/contracting/
procurement](https://www.portoftacoma.com/business/contracting/procurement)
Plan set is locked and only accessible as an independent
document.
See "APPROVED - PLAN SET(1).pdf"



CITY OF TACOMA

Planning and Development Services
(253) 591-5030

747 Market St. 3rd Floor
Tacoma, WA 98402
Inspections (253) 573-2587

Commercial Alteration Permit #BLDCA22-0031

Issued Date: 03/11/2022

Expiration Date: 09/07/2022

SITE INFORMATION

Address: 401 E ALEXANDER AVE BLDG #326

Parcel: 5000350011

PERMIT ISSUED TO

PORT OF TACOMA
PO BOX 1837
TACOMA, WA 98401

LICENSED CONTRACTOR

NO CONTRACTOR ADDRESS
FOUND

PROPERTY OWNER

PORT OF TACOMA
PO BOX 1837
TACOMA, WA 98401

PERMIT INFORMATION

Project Description: Miscellaneous building repairs including installation of new interior partition wall bracing, replacement of single-pane courtyard glazing with new storefront windows, and new rust corrosion/paint on exterior metal siding. **Any plumbing or mechanical work will require separate permits**

Permit Fee: \$6,261.82

Project Coordinator: N/A

Related Site Record: N/A

Related Land Use Record: N/A

CONDITIONS OF APPROVAL

Effective immediately until further notice, Governor Inslee's COVID-19 proclamations affect construction activities, and all applicants must review and adhere to the Proclamation 20-25, which is attached to this permit document.

To schedule or manage inspections by phone (253) 573-2587 or online at aca-prod.accela.com/TACOMA/

PRINTED PERMIT AND APPROVED PLANS MUST BE KEPT ON SITE DURING CONSTRUCTION

All plumbing, heating, and electrical work will be performed by either the home owner or by a contractor licensed to do the same. Separate permits are required for other work, including but not limited to, sanitary and storm sewer, sidewalk, curb and gutter, driveways, parking lot paving, street improvements, fire protection, and signs. Plumbing and mechanical permits can be incorporated into some permits.



CITY OF TACOMA

Planning and Development Services
(253) 591-5030

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VALUATIONS

Code Calculated Valuation:

\$226,000

Estimated Valuation:

\$226,000

PROJECT DETAILS

Change in Occupancy:

No

Change of Use:

No

Current Building Occupancy:

B Business

Night or Weekend Work:

NO

Proposed Occupancy:

B Business

Type of Work:

Remodel (T.I.)

BUILDING INFORMATION

Basement:

NO

EV Charging Stations:

No

Floor Area Under Permit Scope:

NaN

Marijuana Use:

Not Applicable

Risk Category:

II

Seismic Upgrade:

Not Applicable

Single or Multi-Tenant Building?:

Multi-Tenant

Unreinforced Masonry:

No



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APPROVED REVIEWERS

Category	Approved By	Email	Phone Number
Building Review	David Johnson	djohnson2@cityoftacoma.org	253-229-6663
Critical Areas Review	Anna Hudson	ahudson2@cityoftacoma.org	
Document Review	David Johnson	djohnson2@cityoftacoma.org	253-229-6663
Fire Protection Review	Chris Seaman	cseaman@cityoftacoma.org	253-591-5503
Flood Hazard Review	David Johnson	djohnson2@cityoftacoma.org	253-229-6663
Inspection Review	Pat Barry	pbarry@cityoftacoma.org	253-304-8462
Land Use Review	Kristina Haycock	khaycock@cityoftacoma.org	253-244-1930

GENERAL:

PERMISSION IS HEREBY GIVEN TO DO THE DESCRIBED WORK, AS NOTED ON THE REVERSE SIDE, ACCORDING TO THE CONDITIONS HEREON AND ACCORDING TO THE APPROVED PLANS AND SPECIFICATIONS PERTAINING THERETO, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF TACOMA.,

YOUR ATTENTION IS CALLED TO THE FACT THAT IT SHALL BE THE DUTY OF THE PERMITEE (General Contractor) to assure that all necessary inspections are called for and approved by the City Inspectors.

YOUR ATTENTION IS CALLED to the fact that in addition to the called for inspections specified by the applicable codes, the Building Official may make or require any other inspections of any construction work necessary to ascertain compliance with the provisions of City Codes and other laws which are enforced by the City of Tacoma.

YOUR ATTENTION IS CALLED to the fact that in addition to regularly scheduled inspections during construction there shall be a final inspection and approval on all buildings or structures when completed and ready for occupancy. AU required off-site improvements (curbs, sidewalks, storm sewers, etc.) must be completed at time a final inspection and prior to occupancy of building. Construction of off-site improvements requires scheduled inspections during construction in addition to the final inspection.

SPECIAL PERMITS

The holder of Special Permits agrees to the following stipulations:

1. To complete the work encompassed by the Special Permit in accordance with the current edition of the WSDOTIAFWA Standard Specifications as amended by the City of Tacoma General Special Provisions and in accordance with any special provisions or conditions set forth before final acceptance as required by the provisions of the Street Obstruction Bond.
2. To indemnify and hold the City of Tacoma harmless from any and all damages done to any person or property which may arise from the construction encompassed by the Special Permit.
3. To submit for review and approval to the Traffic Engineer a traffic control plan developed in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The traffic control plan shall show pedestrian access through the work zone.
4. To protect the public by placing adequate barricades, signs, cones, lights or other traffic control devices in accordance with the approved traffic control plan. It is understood that traffic lane closures and or sidewalk closures are limited to that which is specifically permitted herein. No other closures will be allowed without prior written approval of the City Engineer.
5. To provide and maintain protected pedestrian and ADA compliant disability access on walkways at all times.
6. The City of Tacoma does not guarantee sewer location or depth information. It shall be the permittee's responsibility to verify sewer and sewer stub locations and depths.
7. To restore Rights-of-Way in accordance with the City's Rights-of-Way Restoration Policy and City of Tacoma Standard Plans
8. Trench backfill within all improved streets or streets proposed for improvement shall be full depth bank run gravel or approved equal by the Construction Division.
9. All cuts in arterial streets shall be patched and maintained with Hot Mix Asphalt until permanent repairs are completed. All cuts in residential streets or alleys shall be patched and maintained with cold mix asphalt until permanent repairs are made. Permanent repairs shall be per current City of Tacoma Standard Plans. Streets and alleys shall be permanently repaired within 30 days.
10. To be responsible for the preservation of any utilities within the construction area.

CALL TOLL FREE BEFORE YOU DIG -1-800-424-5555 (Utilities Underground Location Center)

11. 24 Hour notice is required prior to any inspection. Construction Division 253-591-5760, Traffic Signal/Streetlight 253-591-5287.
12. The Special Permit Expiration date is 30 days from the issue date unless otherwise noted.

The City of Tacoma encourages the reuse and recycling of construction and demolition debris to help meet its waste reduction goals and support local economic activity. More information on construction and demolition material reuse/recycling along with a list of local companies can be found here:

- [Construction and Demolition Waste](#)
- [Reuse/Recycling Companies](#)

Reinspections for Building, Plumbing, and Mechanical Permits

Reinspections are considered additional effort by the City's Planning and Development Services staff that have not been included in the original permit cost. City inspectors have limited time at each site and therefore, must have all necessary information as well as clear access to the completed work at the time of their arrival. **The approved plans and permit card must also be immediately available to the inspector upon his/her arrival.** Cancellation of inspections must occur by 6:00 AM on the day of the inspection. City inspectors may arrive at the site as early as 8:00 AM; therefore, it should be planned to have all work completed and ready for inspection by 8:00 AM on the day of the inspection.

Reinspection fees will be charged per authorized fee code Title 2.09 under the following circumstances:

1. Work for which the inspection has been scheduled is not completed when the inspector arrives on site.
2. Clear access to the inspection area has not been provided at the time of the inspector's arrival.

This policy applies to reinspections for building, plumbing and mechanical permits issued by the department of Planning and Development Services.

Appeal of a reinspection fee?

If you were issued a re-inspection fee that you believe was un-warranted, you may appeal the fee by submitting a written explanation of the circumstances. The appeal must be submitted to our office at: Planning & Development Services, 747 Market St Rm 345, Tacoma WA, 98402 or via e-mail at: pdsinspection@cityoftacoma.org

The appeal must include the following items:

1. Written explanation for appeal submitted in writing
2. Include owner/contractor name
3. Include contact phone and email address
4. Include Permit number and address

A Decision will be rendered within three (3) business days



STATE OF WASHINGTON
Office of the Governor

MEMORANDUM

TO: Interested Stakeholders

FROM: Governor Jay Inslee

DATE: March 25, 2020

SUBJECT: Construction Guidance - Stay Home, Stay Healthy Proclamation (20-25)

In general, commercial and residential construction is not authorized under the Proclamation because construction is not considered to be an essential activity.

However, an exception to the order allows for construction in the following limited circumstances:

- a) Construction related to essential activities as described in the order;
- b) To further a public purpose related to a public entity or governmental function or facility, including but not limited to publicly financed low-income housing; or
- c) To prevent spoliation and avoid damage or unsafe conditions, and address emergency repairs at both non-essential businesses and residential structures.

To that end, it is permissible for workers who are building, construction superintendents, tradesmen, or tradeswomen, or other trades including, but not limited to, plumbers, electricians, carpenters, laborers, sheet metal, iron workers, masonry, pipe trades, fabricators, heavy equipment and crane operators, finishers, exterminators, pesticide applicators, cleaning and janitorial staff for commercial and governmental properties, security staff, operating engineers, HVAC technicians, painting, moving and relocation services, forestry and arborists, and other service providers to provide services consistent with this guidance.

All construction activity must meet social distancing and appropriate health and worker protection measures



Inspection Record Card

Planning and Development Services
Schedule online at TacomaPermits.org/Inspections

NOTICE

Post this card and the approved plans conspicuously on the construction site for inspections.

Building

Structure, Plumbing & Mechanical.....

253-573-2587

Fire / Sprinkler.....

253-573-2587

Electrical.....

253-502-8277

Zoning/Landscaping Final.....

253-591-5030 (option 4)

Site/ROW.....

- Storm and Sanitary Connections New/Repair
- Water Line New/Repair
- All Right-of-Way/Site work including Storm and Sanitary
- Oil Water Separator, Grease Traps, Storm Water
- Filter Devices & Source Control Inspections

RECORD NUMBER: BLDCA22-0031

DATE ISSUED: 03/11/2022

TO: PORT OF TACOMA **CONTACT#:** Invalid Phone #

ADDRESS: 401 E Alexander Ave

WORK DESCRIPTION Miscellaneous building repairs including installation of new interior partition wall bracing, replacement of single-pane courtyard glazing with new storefront windows, and new rust corrosion/paint on exterior

Request All That Apply	Inspection Schedule	Date	BY
	Clear and Grade / Initial Erosion Control		
	Building Footing		
	Building Foundation Walls		
	Plumbing / Mechanical Groundwork		
	Slab (Base and Insulation)		
Required Before The Building Framing Inspection	Floor Framing (prior to decking)		
	Shear Wall Nailing (before siding)		
	Plumbing Rough-in		
	Mechanical Rough-in (HVAC & exhaust)		
	Gas Piping		
	Electrical Rough-in		
	Water Line Installation		
	Storm Line Installation		
	Sanitary / Side Sewer Installation		
	Erosion Control Maintenance (BPM)		
	Building Framing and Caulking		
	Insulation		
Required Before The Building Final Inspection	Drywall		
	Suspended Ceiling (see back of card)		
	Plumbing Final		
	Mechanical Final		
	Electrical Final		
	Utilities Final (Water/Sewer/Storm)		
	Sidewalk, Curb and Gutter, Driveway		
	Sanitary Device Final		
	Storm Device Final		
	Final Erosion Control & Site Stabilization		
	Site Development Final		
	Building Final (see back of card)		

WARNING: It is unlawful to occupy the premises until all applicable final inspection have been made.

SUPPLEMENTAL INSPECTIONS ON THE BACK

