PORT OF TACOMA
TACOMA, WASHINGTON
NIM TOWER FOURTH FLOOR RENOVATIONS

PROJECT NO. 101247.02
CONTRACT NO. 070929

Dakota Chamberlain

Director, Engineering

Hughes Wike, PE

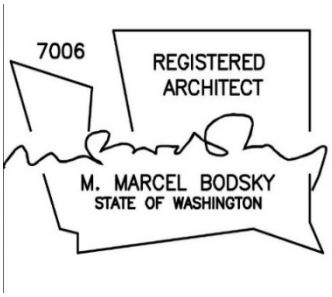
Project Manager

END OF PROJECT TITLE PAGE

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:

SEAL & SIGNATURE	SECTION(S)
Marcel Bodsky – Architect	024119, 064116, 072100, 079200, 092900, 096513, 096813, 099123, 100500, 113013
John Rice – PE Electrical	0260500, 260519, 260526, 260533, 262726, 265119
Andrew Langdon – PE Mechanical	220500, 221000, 221300, 224000



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END OF SECTION

PROCUREMENT AND CONTRACTING REQUIREMENTS

SPECIFICATIONS

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

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

Sheet No.	Drawing Title
G1	Cover Sheet - Drawing Index
G2	Symbols & Abbreviations
A1	Floor Plan & Reflected Ceiling Plan
A2	Interior Elevations
A3	Details
M1	Fourth Floor Plumbing Plan
E1	Electrical Symbols
E2	Electrical Floor Plans
E3	Electrical One-Line and Schedules
REF #1	Reference Drawing - Original Site Plan 1988

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF LIST OF DRAWINGS

NIM TOWER FOURTH FLOOR RENOVATIONS

PROJECT NO. 101247.02 | CONTRACT NO. 070929

Scope of Work:

The work required for this project includes:
- Removal and replacement of existing cabinets and countertops.
- Replacement of existing light fixtures.
- Addition of new undercounter refrigerators.
- Patching and painting of existing walls and ceilings.
- Installation of new floor covering and base.
- Addition of new hand sink.

Bid Estimate:

Estimated cost range is $73,600 to $81,400, plus Washington State Sales Tax (WSST).

Sealed Bid Date/Time/ Location:

Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington until **3:00 P.M. on** March 13, 2019**,** at which time they will be publicly opened and read aloud.

Pre-bid Conference and Site Tour:

A pre-bid conference and site visit have been set for February 27, 2019 at 11:00 A.M.. The site visit will convene at the Port's Administrative building, located at One Sitcum Plaza. The following Personal Protective Equipment is required for the site visit: sturdy shoes, reflective vest, gloves, safety glasses, hearing protection, and hardhat.

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).

Bidding Security:

Each bid must be accompanied by a Certified Check or Bid Security Bond in an amount equal to five (5) percent of the bid.

Contact Information:

All questions are to be put into writing to the Port at procurement@portoftacoma.com. No oral answers will be binding by the Port.

Questions will not be accepted after seven (7) days prior to bid.

Bidding Documents:

Plans, Specifications, Addenda, and Plan Holders List for this project are available on-line through The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts," "Procurement," and then the Procurement Number 070929. 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 00 21 00 - Instructions to Bidders.

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. "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 the Bid and intent to enter into a Contract with the Bidder.

C. The “Award Requirements” include the statutory requirements as a condition precedent to Award.

D. 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.

E. 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.

F. 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.

G. 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.

H. A “Bidder” is a person or entity who submits a Bid.

I. The “Bidding Documents” include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, any other sample bidding and contract forms, the Bid Bond, and the proposed Contract Documents, including any Addenda issued prior to the Bid Date.

J. 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.

K. 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.

L. 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 prospective 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 and 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 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. Bidders and Sub-Bidders shall be registered and shall hold such licenses as may be 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. 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. 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 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 percent (5%) 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.

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) (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 unforfeited 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, One Sitcum Plaza, Tacoma, WA 98421.

b. If a Bid is delivered, it shall be delivered to the Front Reception Desk, Port of Tacoma, One Sitcum Plaza, Tacoma, WA 98421.

c. The time stamp clock at the Front Reception Desk at One 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 sixty (60) 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 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 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 (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. Within ten (10) days after the Port's Notice of Award of the Contract, the apparent low Bidder shall also submit to the Port:

    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 percent (10%) 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: (1) withdraw their Bid, (2) 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 (3) 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 ten (10) 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. The cost of such bonds shall be included in the Base Bid.

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 ten (10) 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

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes administrative and procedural requirements for substitutions.

1.02 DEFINITIONS

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 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 bid date may originate directly from a prime bidder, or from a prospective supplier or subcontractor.

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 project.

2. Engineer's Action: Engineer will review substitution requests if received electronically to procurement@portoftacoma.com at least 7 days prior to the bid opening date set forth in these documents. 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 opening 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 or 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 A/E and Owners.

h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.

i. Research reports evidencing compliance with building code in effect for project

j. Comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.

k. Cost information, including a proposal of change, if any, in the Contract Sum.

l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.

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 7 calendar days of receipt of a request for substitution. Engineer will notify Contractor through Port of acceptance or rejection of proposed substitution within 15 calendar days of receipt of request, or 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 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 Contractor's construction 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 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 15 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 Contractor's construction 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 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: NIM TOWER FOURTH FLOOR RENOVATIONS **PROJECT NO.: 101247.02**

SUBMITTED BY: _____ CONTRACT NO.: 070929
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 progress 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 online at www.portoftacoma.com, but will not be part of the Contract Documents, as follows:

1. Reference Drawings: Entitled Control Tower for North Intermodal Yard, dated November 17, 1988.

1.02 AVAILABILITY

A. Reference Documents are available online through the Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts," "Procurement," and then the Procurement Number.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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. The Port is reasonably certain that asbestos and lead will not be disturbed by the project. If the Contractor encounters material suspected of containing lead or asbestos which will interfere with the execution of the work, the Contractor shall stop work and notify the Engineer.

B. Contractor is notified that certain portions of the Work area are known to contain universal wastes associated with fluourescent bulbs and ballast, as detailed in the Port of Tacoma NIM Tower Hazardous Building Materials Assessment dated May 16, 2018. A copy of this report is in the Appendix.

1.03 NOTIFICATION AND SUSPENSION

A. In the event the Contractor detects the presence of potentially contaminated materials not previously identified in this specification, the Contractor shall 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 potentially contaminated materials, if warranted. Depending upon the type of contaminated materials identified, the Port may suspend work in the vicinity of the discovery under the provisions of General Conditions.

B. 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 potentially contaminated material, the following alternate methods of operation are foreseen as possible:

1. Contractor to resume work as before the suspension.
2. 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.
3. The Port to direct the Contractor to dispose or treat the material in an approved manner.
4. The Port to terminate or modify the Contract.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

BIDDER'S NAME: _____

PROJECT TITLE: **NIM TOWER FOURTH FLOOR RENOVATIONS**

The undersigned Bidder declares that it has read the Contract Documents, 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 of the Port of Tacoma, 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	NIM Tower Renovation	1	LS		
TAXABLE BASE BID SUBTOTAL					

TOTAL BID AMOUNT	
10.1% 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.

Non-Collusion Representation. The Bidder declares under penalty of perjury that the Bid submitted is a 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-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, 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 Chapter 49.46, 49.48, or 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 security bond in substantially the form set forth in Section 00 43 13, Bid Security Form for at least 5% of the Base Bid Subtotal, shall be submitted with this Bid.

Name of Firm	Date
Signature	By Title
Mailing Address	City, State Zip Code
Telephone Number	Email Address
WA State Contractor's License No.	Date of Issue Expiration Date
Unified Business Identifier (UBI) 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.

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 6 months of bid opening 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 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

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 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 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 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 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 Contract Work, as an equivalent to the Total Bid Price, 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: NIM Tower Fourth Floor Renovations
PROJECT NO. 101247.02
CONTRACT NO. 070929

Responsibility Certification Form

The Low responsive Bidder shall complete the Responsibility Detail Form, attach all documentation, and submit to the Port within 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: NIM TOWER FOURTH FLOOR RENOVATIONS
BIDDER: _____
CONTRACT AND PROJECT NUMBER: 070929 / 101247.02

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 39.04.350.
This checklist should be submitted to the Port of Tacoma Contracts Administrator within 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 chapter 19.28 RCW, or an elevator contractor license, if required by chapter 70.87 RCW.	
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 39.12.065(3). Check the Department of Labor and Industries http://www.lni.wa.gov/TradesLicensing/PrevWage/AwardingAgencies/DebarredContractors/.	

Item No.	Item	Initials/ Comments
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. Certificate of Coverage letter issued/dated within the last six 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:	**NIM Tower Fourth Floor Renovations**	**(Title)**
	101247.02 | 070929	(Project/ Contract No.)
	710 Port of Tacoma Road	(Project Address)
	Tacoma, WA 98421	(Project Address 2)
The "Engineer" is:	**Dakota Chamberlain**	**(Engineer)**
	Director of Engineering	(Title)
	dchamberlain@nwseaportalliance.com	(Email)
	(253) 592-6734	(Phone No.)
The "Contractor's Representative" is:	_____	**(Representative)**
	_____	Title
	_____	(Email)
	_____	(Phone No.)

BACKGROUND AND REPRESENTATIONS:

The Port has caused Drawings, Specifications, and other Contract Documents to be prepared for the performance of Work on the Project.

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 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 this agreement is executed.

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 **73** calendar days from contract execution, subject to adjustments of this Contract Time as provided in the Contract Documents. The Contractor shall achieve Final Completion of the 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 not penalties individually or cumulatively.

The liquidated damages for failure to achieve Substantial Completion by the prescribed date shall be **$250** per calendar day. After the prescribed Final Completion date, the liquidated damages for failure to achieve Final Completion shall be **$250** 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 for each and every calendar day that Substantial Completion and/or Final Completion of the work is delayed beyond the prescribed 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:	_____

PERFORMANCE BOND # _____

CONTRACTOR (NAME AND ADDRESS)	SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)
_____	_____
_____	_____
_____	_____
OWNER (NAME AND ADDRESS)	AGENT OR BROKER (FOR INFORMATION ONLY)
PORT OF TACOMA	_____
P.O. BOX 1837	_____
TACOMA, WA 98401-1837	_____

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 NIM Tower Fourth Floor Renovations, Project No. 101247.02/Contract No. 070929, 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 Chapter 39.08 Revised Code of Washington.

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 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)	AGENT OR BROKER (FOR INFORMATION ONLY)
PORT OF TACOMA	_____
P.O. BOX 1837	_____
TACOMA, WA 98401-1837	_____

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 NIM Tower Fourth Floor Renovations, Project No. 101247.02/Contract No. 070929, 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 Chapter 39.08 Revised Code of Washington.

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 or Contract Time and the amounts payable to the Contractor. 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 _____, 2018.

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: NIM TOWER FOURTH FLOOR RENOVATIONS
PROJECT NO.: 101247.02_____
CONTRACT NO.: 070929_____

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 5% of any increases in the contract amount 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. 070929 with the Port for NIM Tower Fourth Floor Renovations, Project No. 101247.02.

WHEREAS, said contract and RCW 60.28 require the Port to withhold from the Principal the sum of 5% 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 Chapter 60.28 RCW.

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 Chapter 60.28 RCW. 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 Chapter 60.28 RCW, 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 Chapter 60.28 Revised Code of Washington (RCW) 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

To: Bank Name, Address, Phone

_____
_____
_____

Agency: Port of Tacoma
PO Box 1837
Tacoma, WA 98401-1837

Escrow Account No.: _____

Contract No.: 070929

Project No.: 101247.02

Project Title: NIM Tower Fourth Floor Renovations

This Retainage Escrow Agreement (the "Agreement") is made and entered into as of _____, 20__, by and among _____ ("Contractor"), with an address of _____, the Port of Tacoma (the "Port") and _____ ("Bank").

Contractor has directed the Port to deliver to Bank its retainage warrants or checks, which shall be payable to Bank and the Contractor jointly. Such warrants or checks are to be held in a restricted deposit account as described above (the "Pledged Account") and disbursed by Bank only in accordance with this Agreement and Chapter 60.28 RCW, and upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. The Port shall deliver to Bank from time to time checks or warrants payable jointly to Bank and the Contractor. Bank is hereby authorized by the Contractor to endorse in the Contractor's name any such check or warrant so that Bank may receive the proceeds thereof and invest the same and deposit such proceeds into the Pledged Account. The power of endorsement hereby granted to Bank by the Contractor shall be deemed a power coupled with an interest and shall be irrevocable during the term of this Agreement. Although Bank may be a payee named in such warrants or checks as shall be delivered to Bank, Bank's duties and responsibilities with respect to the same shall be only those duties and responsibilities that a depository bank would have pursuant to a control agreement among the Bank, the Port, and Contractor, as such agreement may exist in a form satisfactory to the Port and Article 4 of the Uniform Commercial Code of the State of Washington, as amended, for an item deposited with Bank for collection. For the purpose of each such purchase, Bank may follow the last written direction received by Bank from the Contractor, provided such direction otherwise conforms with the restrictions on investments recited herein. Below is a list of such bonds and other securities approved by the Port (the "Securities"). Other securities, except stocks, may be selected by the Contractor, subject to the express prior written approval of the Port, in its sole and absolute discretion. Purchase of such Securities shall be in a form which shall allow the Bank alone to reconvert such Securities into money if Bank is required to do so by the Administrator as provided in paragraph 5 of this Agreement. The investments selected by the Contractor, as approved by the Port and purchased by Bank, must mature on or prior to the completion date of the contract between the Contractor and the Port, including extensions thereof (the "Contract").
2. As security for the completion of the Project and satisfaction of the Contract, Contractor hereby pledges, assigns, hypothecates, and transfers to the Port, the Pledged Assets (as defined below) and grants to the Port a security interest under the Uniform Commercial Code of the State of Washington, as amended, in and to the Pledged Assets. This Agreement creates and grants a valid, perfected first priority lien on the Pledged Assets, enforceable as such against all creditors of Contractor. Contractor covenants and agrees with the Port that it will not (a) sell, assign, transfer, exchange, or otherwise dispose of, or grant any option with respect to, the Pledged Assets, (b) create, incur, or permit to exist any lien or option in favor of, or any claim of any person with respect to, any of the Pledged Assets, or any interest therein, except for the lien provided for by this Agreement, (c) withdraw any money, securities or property from the Pledged Account, except as provided herein, or (d) attempt to modify or terminate Contractor's the agreement under which the Pledged Account was established.

Contactor will defend the right, title, and security interest of the Port in and to the Pledged Assets against the claims and demands of all persons. “Pledged Assets” means the Pledged Account, now or hereafter constituted, including (a) all credit balances or other money now or hereafter credited to the Pledged Account; (b) all money, certificated and uncertificated securities, commodities contracts, instruments, documents, general intangibles, financial assets or other investment property now or hereafter in, or distributed from, the Pledged Account; (c) all income, products and proceeds of the sale, exchange, redemption or exercise of the foregoing, whenever occurring, whether as dividends, interest payments or other distributions of cash or property, including, without limitation, proceeds in the nature of accounts, general intangibles, and insurance proceeds; (d) any rights incidental to the ownership of the foregoing, such as voting, conversion and registration rights and rights of recovery for securities violations; and (e) all books and records pertaining to the foregoing.

3. When an interest on the Securities accrues and is paid, Bank shall collect such interest and forward it to the Contractor at the address designated below unless otherwise directed in writing by the Contractor.

4. Bank is not authorized to deliver to the Contractor all or any part of the Securities (or any monies derived from the sale of such Securities, or the negotiation of the Port’s warrants or checks) except in accordance with Chapter 60.28 RCW based on written instructions from the Senior Contract Administrator for the Port (the “Administrator”). The Administrator shall inform the Bank and keep the Bank informed in writing of the name of the person or persons with authority to give the Bank such written instructions. Compliance with such instructions shall relieve Bank of any further liability related thereto. The estimated completion date on the Contract underlying this Agreement is _____. Upon request by Bank, the Port shall advise Bank in writing of any material change in the estimated Contract completion date. If such estimated completion date is changed, Bank is authorized to reinvest the monies held hereunder in accordance with the new estimated completion date.

5. In the event the Administrator orders Bank to do so in writing, and notwithstanding any other provisions of this Agreement, Bank shall, within ten (10) days of receipt of such order, reconvert into money the Securities and return such money together with any other monies, including accrued interest on such Securities to the Port. Consent of Contractor shall not be required for payment to the Port hereunder, and objection or other communication from Contractor shall not prevent, delay, or otherwise affect payment to the Port forthwith in accordance with the Port’s order and this Agreement.

6. The Contractor agrees to pay Bank as compensation for Bank’s services hereunder as follows:

   Payment of all fees shall be the sole responsibility of the Contractor and shall not be deducted from any checks, moneys, Securities, or other property placed with Bank or held by Bank pursuant to this Agreement until and unless the Port directs the release thereof to the Contractor, whereupon Bank shall be granted a first lien upon such property released and shall be entitled to reimburse Bank from such property for the entire amount of Bank’s fees as provided for hereinabove. In the event that Bank is made a party to any litigation with respect to the checks, moneys, Securities, or other property held by Bank hereunder, or in the event that the conditions of this escrow are not promptly fulfilled or that Bank is required to render any service not provided for in these instructions, or that there is any assignment of the interests of this escrow or any modification hereof, Bank shall be entitled to reasonable compensation for such extraordinary services from the Contractor and reimbursement from the Contractor for all costs and expenses, including reasonable attorney fees occasioned by such default, delay, controversy, or litigation.

7. Should Bank at any time and for any reason desire to be relieved of Bank’s obligation as escrow holder hereunder, Bank shall give written notice to the Port and the Contractor. The Port and Contractor shall, within 20 days of the receipt of such notice, jointly appoint a successor escrow holder and instruct Bank to deliver all securities and funds held hereunder to said successor. If Bank

is not notified of the appointment of the successor escrow holder within 20 days, Bank may return the subject matter hereof to the Port, and upon so doing, it absolves Bank from all further charges and obligations in connection with this Agreement.

8. Any one or more of the following events constitutes an Event of Default ("Event of Default") under this Agreement: (a) Contractor breaches the Contract; (b) Contractor fails to perform any covenant or obligation under this Agreement; (c) Contractor shall file a voluntary petition in bankruptcy or such a petition shall be filed against Contractor; and (d) a court of competent jurisdiction shall enter an order, judgment or decree approving a petition filed against Contractor seeking any reorganization, dissolution or similar relief under any present or future federal, state or other statute, law or regulation relating to bankruptcy, insolvency or other relief for debtors.

9. Upon the occurrence of an Event of Default, the Port may exercise, in addition to all other rights and remedies granted in this Agreement, all rights and remedies of a secured party under the Uniform Commercial Code of the State of Washington, as amended. Without limiting the generality of the foregoing, the Port, without demand of performance or other demand, presentment, protest, advertisement, or notice of any kind (except any notice required by law, this Agreement) to or upon Contractor or any other person (all and each of which demands, defenses, advertisements and notices are hereby waived to the extent not prohibited by law), may, upon the occurrence of an Event of Default, collect, receive, appropriate, and realize upon the Pledged Assets, or any part thereof, and/or may forthwith withdraw from the Pledged Account, sell, assign, give option or options to purchase or otherwise dispose of and deliver the Pledged Assets or any part thereof (or contract to do any of the foregoing).

10. This Agreement shall not be binding until executed by the Contractor and the Port and accepted by Bank.

11. This instrument contains the entire agreement between Bank, the Contractor, and the Port with respect to this Agreement and Bank is not a party to nor bound by any instrument or agreement other than this; Bank shall not be required to take notice or demand nor be required to take any action whatever, except as herein expressly provided; Bank shall not be liable for any loss or damage not caused by Bank's own negligence or willful misconduct.

12. The foregoing provisions shall be binding upon the assigns, successors, personal representatives and heirs of the partied hereto.

13. This Agreement is subject to the laws of the State of Washington and is to be construed in accordance therewith.

14. Any legal action or proceeding with respect to this Agreement may be brought in the courts of the State of Washington or in the courts of the United States for the Western District of Washington, and by execution and delivery of this Agreement, Contractor consents, for itself and in respect of its property, to the nonexclusive jurisdiction of those courts. Contractor irrevocably waives any objection, including any objection to the laying of venue or based on the grounds of forum non conveniens, which it may now or hereafter have to the bringing of any action or proceeding in such jurisdiction in respect of this Agreement or any document related hereto.

15. The Contractor's Federal Income Tax Identification number is _____.

The undersigned have read and hereby approve this Agreement on the date first set forth above.

Contractor:	**Port of Tacoma:**
_____	_____
Signature	Signature
_____	_____
Name/Title	Name/Port Treasurer or Deputy Treasurer
_____	_____
Date	Date

The above escrow instructions received and accepted this ____ day of _____, 20__.

Bank: By: _____ Name: _____
(Signature of Authorized Bank Officer) Title: _____

SECURITIES AUTHORIZED BY THE PORT:

1. FDIC insured time deposits and time deposits in commercial banks authorized by the Washington State Public Deposit Protection Commission;
2. Savings account deposits in commercial banks authorized by the Washington State Public Deposit Protection Commission;
3. Bills, certificates, notes, or bonds of the United States;
4. Other obligations of the United States or its agencies; and
5. Obligation of any corporation wholly-owned by the government of the United States.

INSTRUCTIONS FOR RETAINAGE ESCROW AGREEMENTS:

Whenever possible, use the Port approved Escrow Agreement. The Port, at its discretion, may or may not accept an agreement form from another source.

Please return all three (3) originals of the Agreement, with completed contractor and bank information and signatures, and the escrow account number. The Port will review and sign the Agreement and distribute copies. One (1) original will go directly to the Bank, one (1) original will be returned to the Contractor.

Fill in the following on the Escrow Agreement:

1. Page 1 – Escrow Account Number
2. Page 1 – Name, address, and phone number of the Bank
3. Page 2 – Signature, typed/printed name, date, and the title of the Contractor Signatory
4. Page 2 – Signature, typed/printed name, date, and the title of the Authorized Bank Officer signatory

Do not fill in the date in the introductory paragraph. The Port will fill in this date once the document has been fully executed by the Port.

END OF SECTION

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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. “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.

B. "Day" means a calendar day unless otherwise specifically designated.

C. "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.

D. "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.

E. "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.

F. “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.

G. "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.

H. “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.

I. "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 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. 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. 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 Progress 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, including its Commission, officers, managers, employees (including 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. 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.

H. 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 SMALL BUSINESS ENTERPRISE PARTICIPATION.

A. Small business participation encouraged. The Port's policy is to encourage the Contractor to solicit and document participation, and to provide and promote the maximum lawful, practicable opportunity for increased participation by small business enterprises.

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 Progress 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 Progress 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 escrow account in a bank, mutual savings bank, or savings and loan association; 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 same daily liquidated damage rate specified in the Contract Documents due the Port for the Contractor's delay in achieving Substantial Completion. By submitting a bid on the Work and executing the Contract, the Contractor represents that these liquidated damages are a reasonable estimate of its loss.

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) and any liquidated damages paid hereunder.

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 ten (10) 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 Progress 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

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 10 days of the issued Notice of Award to the Contractor.

B. Updated evidence of insurance as required until final completion.

1.03 CONTRACTOR LIABILITY 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 (6)" or better.

B. The Port of Tacoma (Port) will be included as an additional insured(s) for both ongoing and completed operations by endorsement to the policy using ISO Form CG 20 10 11 85 or forms CG 20 10 03 97 and CG 20 37 10 01 (or equivalent coverage endorsements). The inclusion of the Port as an additional insured(s) 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;

f. By endorsement to the policy, not exclude work within fifty feet of any railroad track;

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.

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 and $2,000,000 in the aggregate. 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. The Additional Insured endorsement shall NOT be limited to the amounts specified by this contract unless expressly waived in writing by the Port of Tacoma.

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 is named as additional insured.

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) days 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.

C. 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.

D. 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

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 submittal deadline for this project, the applicable effective date for prevailing wages for this project is March 13, 2019.

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 copy of the applicable prevailing wage rates are also available for viewing at the Port Administration Building, located at One 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, or if no schedule is attached, 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: (1) a copy of the Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician of the Department of Labor and Industries, and (2) 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 Chapter 51 RCW ("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 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 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 work site or easily displayed when requested.

1.02 TRANSPORTATION WORKER IDENTIFICATION CARD (TWIC) SUMMARY

A. TWIC is required for all personnel needing unescorted access to secure and restricted areas of Port facilities subject to 33 CFR 105, including truckers, surveyors, construction personnel, and delivery personnel. Secure areas are those areas with security measures for access control in accordance with a Coast Guard approved security plan. Restricted areas are those areas within a secure area that require increased limited access and a higher degree of security protection. New terminals under construction prior to terminal operations may not be designated secure areas. Construction on existing maritime transportation facilities and punchlist or other type of work requirements on facilities that have been certified under 33 CFR will require a TWIC.

B. Contractors should allow for application and enrollment for the security threat assessment and issuance of TWIC when submitting a bid.

1.03 ESCORTING

A. To access restricted Port facilities, all un-credentialed individuals must be accompanied by a person who has been issued a TWIC and trained as an escort.

B. For more information, refer to the Port Security website at: http://www.portoftacoma.com/shipping/security

C. For project specific information, refer to 01 10 00 - Summary.

1.04 ELIGIBILITY FOR TWIC

A. Refer to the Transportation Worker Identification Credential website at: https://www.tsa.gov/for-industry/twic for information on eligibility and applying for TWIC.

1.05 TWIC USE AND DISPLAY

A. Each worker granted unescorted access to secure areas of a facility or vessel must present their cards to authorized personnel, who will compare the holder to his or her photo, inspect security features on the TWIC, and evaluate the card for signs of tampering. The Coast Guard will verify TWIC's when conducting vessel and facility inspections and during spot checks using hand-held scanners, ensuring credentials are valid.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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 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.

2. The NIM Tower Fourth Floor Renovations consists of:

- Removal and replacement of existing cabinets and countertops.

- Replacement of existing light fixtures.

- Addition of new undercounter refrigerators.

- Patching and painting of existing walls and ceilings.

- Installation of new floor covering and base.

- Addition of new hand sink.

1.02 LOCATION

A. The work is located at: North Intermodal (NIM) Rail Yard, 710 Port of Tacoma Road, Tacoma, WA 98421.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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.

2. Protect materials and equipment in areas adjoining the immediate work area.

C. Working Facility

1. The Facility will remain in operation for the duration of construction. The Contractor shall conduct all items of the Work in such a manner as to prevent interference with the normal operations of the Facility.

2. TWIC Escorting Requirements:

a. TWIC escort personnel are not permitted work assignments outside of observing non-TWIC workers.

b. TWIC escort personnel may observe a maximum of five non-TWIC workers.

D. 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 - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 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. 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.

C. Following the Engineers' review, the Contractor shall prepare an original pay estimate with complete supporting documentation attached and submit it electronically using e-Builder®.

D. An estimated cashflow statement projecting the Contractor's monthly billings on the project shall be submitted with each payment application.

1.02 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.

1.03 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.

1.04 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.

1.05 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, completion and submittal and approval of the following:

a. All bonds and insurance certificates

b. Construction Site Safety and Security Plan (CSSP)

c. Initial submittal schedule

d. Schedule of Values

e. Detailed CPM progress schedule

f. Pre-construction photographs and videotapes

g. Submittal of Inspection and Test Plan

h. Hazardous and Contaminated Substance Health and Safety Plan

i. Establishing Contractor's Project Manager, Superintendent, and other required specified personnel on the Work site full time.

j. Furnishing and installing all temporary facilities and controls as needed for the safe and proper completion of the work, including utilities, sanitary facilities, barriers and enclosures, fences, staging and entrance areas, and field offices, as specified.

k. Mobilization onto the site required in support of the Contractor's first 30 days of operations.

l. Furnishing and installing project signs, as specified.

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: NIM Tower Renovation
    1. Item Description: The Work of this item includes all work required to complete the NIM Tower Renovation as included in the Contract Documents that is not specifically included in other bid items described in this section.
    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.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXEUCTION - NOT USED

END OF SECTION

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 the following documentation to the Port:

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.

3. No applications for payment or change orders will be processed for the Contractor until labor and equipment rates have been submitted and approved.

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 1.04.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

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. 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.

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 10 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. 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 preliminary baseline schedule defining planned operations.

B. If the preliminary baseline schedule requires revision after review, submit revised baseline schedule within 10 days.

C. Within 5 days after joint review, submit complete schedule.

D. Submit updated progress schedule with each Application for Payment.

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 preliminary 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. Provide an updated progress schedule with each Pay Application.

END OF SECTION

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 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. Submittal Number
2. Item identification
3. Scheduled submittal date, date returned, date approved
4. Date submittal or material is needed
5. 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 accepted.

1. Per 00 73 63, Emergency Contact Numbers
2. Per 00 73 63, List of Contractor and Subcontractor Personnel
3. Per 00 73 63, 100% TWIC Site - Proof of Compliance
4. Per 01 32 16, Project Schedule
5. Per 01 33 00, Submittal Log
6. Per 01 35 29, Health and Safety Plan (HASP)

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

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 the start of any Work, 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. Signage appropriate to warn site personnel and visitors of anticipated site hazards;

5. Documentation that the necessary workers have completed the required Hazardous Waste Operations and Emergency Response (HAZWOPER) training;

6. Engineering controls/equipment to be used to protect against anticipated hazards;

7. Personal protective equipment and clothing including head, foot, skin, eye, and respiratory protection;

8. Procedures which will be used for:

   a. Lockout/Tagout,

   b. Fall protection,

   c. Hot work,

   d. Suspicious materials and/or unidentified materials,

   e. Odorous conditions and toxic gases;

9. Site housekeeping procedures and personal hygiene practices;

10. Personnel and equipment decontamination plan;
11. Administrative controls;
12. Emergency plan including locations of and route to nearest hospital;
13. Medical surveillance program for site personnel before, during, and after completion of site work;
14. Recordkeeping including:
    a. Documentation of appropriate employee training (e.g., Hazardous Waste Operations and Emergency Response [HAZWOPER] 40-hour training for staff involved with excavation and handling of soil),
    b. Respirator fit testing, and
15. Name and qualification of person preparing the HASP and person designated to implement and enforce the HASP;

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, shall be addressed in the HASP.

B. Specific aspects of construction resulting in physical hazards anticipated for this project include, but are not limited to the following:

1. Heat stress, such as that potentially caused by impermeable clothing (may reduce the cooling ability of the body due to evaporation reduction);
2. Biological hazards, such as mold, insect stings, or bites, poisonous plants (i.e., poison oak, sumac, etc.); and
3. Trips and falls.

C. Firewatch Procedures

1. A firewatch is implemented to ensure the fire-safety of a building, structure or area in the event of any act (e.g., hot work) or situation instigating an increased risk of fire. The term "firewatch" is used to describe a dedicated person or persons whose sole responsibility is to look for fires within an established area.
2. A firewatch is required when all hot work is being performed.
3. The firewatch is to perform the following functions:
    a. Firewatch personnel are to keep diligent watch for fires in the general area where the work is being performed.
    b. Firewatch personnel are to be familiar with facilities and procedures for sounding an alarm in the event of a fire.
    c. Firewatch personnel are to have fire extinguishing equipment readily available and be trained in its use, including practice on test fires.
    d. Firewatch personnel are to inspect the site prior to hot work activities to ensure that combustibles are removed or covered and that any nearby holes or penetrations in the ground and walls are sealed or covered with fire-safe materials.
    e. Firewatch personnel are to watch for fires in all exposed areas. If a fire is located, firewatch personnel are to sound the evacuation alarm immediately and after that try to extinguish the fire, only when obviously within the capacity of the equipment available.
    f. The firewatch is to be maintained for at least 120 minutes after completion of hot work such as cutting, welding, or other open flame operations, in order to detect and extinguish smoldering and flaming fires. During this time, the work area and other adjacent areas where sparks or flame may have traveled are to be searched for signs of combustion.

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 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 hot work;
8. Equipment to support lockout/tagout procedures;
9. Scaffolding and fall protection equipment;
10. Personal protective equipment (hard hats, foot gear, skin, eye, and respiratory protection);
11. Area and personnel exposure monitoring equipment;
12. Demolition equipment and supplies;
13. Decontamination equipment and supplies;
14. First aid equipment;
15. Field documentation logs/supplies.

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. 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.

E. 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.

F. 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.

G. 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.

END OF SECTION

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.

1.02 SUBMITTALS

A. Prior to Notice to Proceed, the Contractor shall submit a list of equipment to be used on the project and certify in writing that all equipment on the list and any additional equipment, including Contractor's, subcontractors or supplier's equipment, shall meet the requirements of 3.01 below.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

A. The Contractor shall meet or exceed EPA Tier 2 off-road diesel engine emission standards for off-road equipment >= 25hp and meet or exceed EPA 1994 on-road diesel engine emission standards for on-road equipment except as follows:

1. Equipment being used in an emergency or public safety capacity

B. The Contractor shall not discharge smoke, dust, and other hazardous materials into the atmosphere that violate local, state or federal regulations.

C. 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.

D. 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

PART 1 - GENERAL

1.01 PERMITS, CODES, AND REGULATIONS

A. The following permits have been acquired and are incorporated into the Contract (refer to Appendices):

1. City of Tacoma Building Permit (BLDCA18-0150)
2. City of Tacoma Plumbing Permit (PLMBC18-0111)

B. Conform with the requirements of listed permits and additional or other applicable permits, codes, and regulations as may govern the Work.

C. 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).

D. 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.

E. 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

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

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 REFERENCES AND STANDARDS

A. For Products or workmanship specified by association, trade, or other consensus 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 by date of issue current on date of Contract Documents, except where a specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. Neither the contractual relationships, duties or responsibilities of the parties in Contract, nor those of the Engineer, shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 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.

1.06 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 Controls: Barriers and enclosures

1.02 TEMPORARY UTILITIES

A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

1.03 TELECOMMUNICATIONS SERVICES

A. Provide, maintain, and pay for telecommunications services as required for project purposes.

1.04 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.

1.05 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.

1.06 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

1.07 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to final completion inspection.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition.

D. 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. Access roads
2. Parking
3. Construction parking controls
4. Haul routes
5. Removal, repair
6. Mud from site vehicles

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 ACCESS TO SITE

A. Contractor shall conduct all business through the gate assigned by the Engineer.

1. The Contractor may be required to relocate entry and related work areas as required by Port Operations.

B. Provide unimpeded access for emergency vehicles. Maintain 20 foot (6 m) width driveways with turning space between and around combustible materials.

C. Provide and maintain access to fire hydrants free of obstructions.

3.02 PARKING

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

B. Parking stalls immediately adjacent to the NIM Tower will be available for Contractor employee vehicles. Should additional parking be necessary, the Engineer will designate supplemental area and Contractor shall provide necessary shuttle service to transport its employees to and from the work site.

3.03 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.

3.04 HAUL ROUTES

A. Confine construction traffic to designated haul routes.

3.05 REMOVAL, REPAIR

A. Repair existing facilities damaged by use, to original condition.

B. Repair damage caused by installation.

3.06 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. When trucks and other equipment are operating on paved public streets and site roadways/paved surfaces, the Contractor will be required to clean said streets, roadways, and other paved surfaces at least daily, and at other times if required by the Engineer.

C. 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

PART 1 - GENERAL

1.01 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. See Section 01 33 00 - Submittal Procedures

B. 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.

C. 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. Fit work flush to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with a material approved by the Engineer or inspector, to full thickness of the penetrated element.

I. 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

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.

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.

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 rubbish, waste material, litter, and other foreign substances.

b. Remove tools, construction equipment, machinery, and surplus material from Project site.

c. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.

d. Remove debris and surface dust from limited access spaces, including roofs. attics, and similar spaces.

e. Remove labels that are not permanent.

f. Clean light fixtures, lamps. globes, and reflectors to function with full efficiency.

g. 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

PART 1 GENERAL

1.01 SUMMARY

A. This section includes construction waste management requirements.

1.02 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. This also includes uncontaminated soils that are designated as geotechnically unsuitable or excess excavation.

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.

1.03 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. Asphalt
3. Concrete and concrete masonry units
4. Ferrous and non-ferrous metals
5. 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.

1.04 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.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SOURCE-SEPARATED CDL RECYCLING

A. Provide individual containers for separate types of CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.02 CO-MINGLED CDL RECYCLING

A. Provide containers for co-mingled CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.03 LANDFILL

A. Provide containers for CDL waste that is to be disposed of in a landfill clearly labeled as such.

3.04 REMOVAL OF CDL WASTE FROM PROJECT SITE

A. Transport CDL waste off Port's property and legally dispose of them.

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 (Contractor’s punch list) indicating the value of each item on the list and reasons why the Work is incomplete.

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 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, 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 7 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, operation and maintenance manuals, 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 7 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.

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. Execution of all Change Orders;

3. Contractor's signed waiver and release of claims on the Engineer provided form;

4. Contractor's submittal of list of all suppliers and subcontractors and the total amounts paid to each on the Engineer provided form; and

5. 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. Operation and Maintenance Manual Submittal

1.02 SUBMITTALS

A. Operation and Maintenance Data:

1. For equipment, or component parts of equipment put into service during construction and operated by the Port, submit completed documents within ten days after acceptance.
2. Submit 2 copy of completed documents 5 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of all document sets as required prior to final submission.
3. Submit 2 sets of revised final documents in final form by Final Completion.

PART 2 - PRODUCTS

2.01 OPERATION AND MAINTENANCE MANUALS

A. For large equipment (such as pumps, generators, machinery),the following information (minimum of 3 printed copies, plus one electronic copy on CD) shall be furnished for all items on the Project requiring operational and/or maintenance procedures and for any additional items indicated by the Engineer. Printed information shall be organized by the Contractor into appropriately sized 3-ring binders (no larger than 3”).The binders shall be sized for material approximately 8-1/2 by 11 inches, and the material in the binders shall not protrude beyond the covers. The binder(s) shall be divided with coversheets for each major item of equipment. The cover sheets shall be typewritten to indicate the name, type of equipment, and location(s) within the Project where installed. A neatly typewritten index shall be provided. Electronic information shall be in PDF format (additional formats where specified) and shall be organized with folders with appropriate file names so information is easily accessible:

1. Equipment Maintenance Summary:
    a. Provide the following information (as applicable, indicate ‘N/A’ where an item does not apply) in Excel spreadsheet format:
        1) Asset Number (to be provided by the Engineer at a later date)
        2) Description
        3) Plan Sheet Number
        4) Parcel Number
        5) Vendor
        6) Manufacturer
        7) Model Year
        8) Serial Number
        9) Warranty – Start Date; Finish Date
        10) Required Preventative Maintenance
        11) Purchase Price
        12) Make

13) Model

14) Fuel Used

15) Capacity

2. Lubrication Information: This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed. Lubricants shall be described in detail, including type, recommended manufacturer, and manufacturer's specific compound to be used.
3. Control Diagrams: Diagrams shall show internal and connection wiring and as-built wiring diagrams (where applicable).
4. Start-up Procedures: These instructions consist of equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.
5. Operating Procedures: These instructions consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, stopping the equipment under specified modes of operation, and for long-term shut-down (moth-balling).
6. Preventative Maintenance Procedures: These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.
7. Overhaul Instructions: These instructions consist of the manufacturer's directions for the disassembly, repair and reassembly of the equipment and any safety precautions that must be observed while performing the work.
8. Parts List: This list consists of the generic title and identification number of each component part of the equipment. This list shall include weights of individual components of each item of equipment weighing over 100 pounds.
9. Spare Parts List: This list consists of the manufacturer's recommendations of number of parts which should be stored by the Port and any special storage precautions which may be required.
10. Exploded View: Exploded or cut views of equipment shall be provided if available as a standard item of the manufacturer's information. When exploded or cut views are not available, plan and section views shall be provided with detailed callouts.
11. Specific Information: Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.
12. Complete identification, including model and serial numbers.
13. Submittal information, as specified in Section 01 33 00 Submittal Procedures.
14. Warranty Information: This information consists of the name, address, and telephone number of the manufacturer's representative to be contacted for warranty, parts, or service information.
15. Provide DVDs, and audio-visual training materials utilized in the manufacturer's instruction program for the Port.
16. All operation and maintenance information shall be comprehensive and detailed and shall contain information adequately covering all normal operation and maintenance procedures.
17. All information shall be specific for the items of equipment installed on the project. Material not directly applicable shall be removed, omitted, or clearly marked as inapplicable.

18. If manufacturer's standard brochures and manuals are used to describe operating and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project.
19. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated. It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project final acceptance.

B. For small equipment and products (such as furnishings or equipment not requiring routine maintenance),the following information (minimum of 3 printed copies, plus one electronic copy on CD) shall be furnished for all items on the Project requiring operational and/or maintenance procedures and for any additional items indicated by the Engineer. Printed information shall be organized by the Contractor into appropriately sized 3-ring binders (no larger than 3").The binders shall be sized for material approximately 8-1/2 by 11 inches, and the material in the binders shall not protrude beyond the covers. The binder(s) shall be divided with coversheets for each major item of equipment. The cover sheets shall be typewritten to indicate the name, type of equipment, and location(s) within the Project where installed. A neatly typewritten index shall be provided. Electronic information shall be in PDF format (additional formats where specified) and shall be organized with folders and appropriate file names so as to make the information easily accessible:

1. Product Summary:
    a. Provide the following information (as applicable, indicate 'N/A' where an item does not apply) in Excel spreadsheet format:
        1) Asset Number (to be provided by the Engineer at a later date)
        2) Description
        3) Plan Sheet Number
        4) Parcel Number
        5) Vendor
        6) Manufacturer
        7) Model Year
        8) Serial Number
        9) Warranty – Start Date; Finish Date
        10) Purchase Price
        11) Make
        12) Model
2. Operating Procedures: These instructions consist of the manufacturer's recommended step-by-step procedures for use of the product.
3. Maintenance Procedures: These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the product.
4. Specific Information: Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.

5. Complete identification, including model and serial numbers.
6. Submittal information, as specified in Section 01 33 00 Submittal Procedures.
7. Warranty Information: This information consists of the name, address, and telephone number of the manufacturer's representative to be contacted for warranty, parts, or service information.
8. Provide DVDs, and audio-visual training materials utilized in the manufacturer's instruction program for the Port.
9. All operation and maintenance information shall be comprehensive and detailed and shall contain information adequately covering all normal operation and maintenance procedures.
10. All information shall be specific for the items of equipment installed on the project. Material not directly applicable shall be removed, omitted, or clearly marked as inapplicable.
11. If manufacturer's standard brochures and manuals are used to describe operating and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project.
12. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated. It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project final acceptance.

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure on floors 4, 3 and 2.
2. Salvage of existing items to be reused or recycled.

1.02 MATERIALS OWNERSHIP

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

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.03 PREINSTALLATION MEETINGS

A. Pre-demolition Conference: Include as part of the Pre-construction Conference prior to the start of demolition activities. Thereafter coordinate directly with Port’s Engineer.

1.04 INFORMATIONAL SUBMITTALS

A. Schedule of selective demolition activities with starting and ending dates for each activity. Include in project schedule.

B. Pre-demolition photographs or video.

1.05 CLOSEOUT SUBMITTALS

A. Inventory of items that have been removed and salvaged.

1.06 FIELD CONDITIONS

A. Port will occupy portions of building immediately above and below selective demolition area. Conduct selective demolition so Port's operations will not be disrupted.

B. Coordinate planning and scheduling all demolition activities with Port’s Engineer prior to executing work.

C. Conditions existing at time of inspection for bidding purpose will be maintained by the Port as far as practical.

1. Before selective demolition, the Port will remove and store all items scheduled to be returned after completion of the work with the following exception:

a. The large commercial printer/copier will remain in the workspace. It the Contractors responsibility to wrap and protect the printer from damage from dust and impact throughout demolition and construction. Do not unwrap until the space is ready to be turned over to the Port.

D. Notify Engineer of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Engineer before start of the Work.

2. If suspected hazardous materials are encountered, do not disturb; immediately notify Engineer. Hazardous materials will be removed by the Port under a separate contract.

F. Storage or sale of removed items or materials on-site is not permitted.

G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

H. Arrange selective demolition schedule so as not to interfere with Port's operations. Demolition and work in occupied spaces shall be scheduled and coordinated with Port Engineer to minimize any impact to Port operations (example: schedule for weekend work).

1.07 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

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

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

PART 3 - EXECUTION

3.01 EXAMINATION

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

3.02 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

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

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.

2. Arrange to shut off utilities with utility companies.

3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.

a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.

b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.

c. Equipment to Be Removed: Disconnect and cap services and remove equipment.

d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.

e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.

g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.03 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

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

3.04 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.

2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

3. Do not use cutting torches.

4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

5. Dispose of demolished items and materials promptly.

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure no interference with Port operations.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.

2. Pack or crate items after cleaning and repairing. Identify contents of containers.

3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

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

3.05 CLEANING

A. Remove demolition waste materials from Project site and demolition waste to a landfill acceptable to authorities having jurisdiction.

1. Do not allow demolished materials to accumulate on-site.

2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.

C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Plastic-laminate-clad architectural cabinets.
2. Plastic laminate-clad countertops
3. Wood furring, blocking, shims, and hanging strips for installing plastic-laminate-clad architectural cabinets that are not concealed within other construction.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings:

1. Include plans, elevations, sections, and attachment details.
2. Layout drawing: Show all countertops and dimensions and dimensioned locations of all plan components used to support countertops.
3. Apply AWI Quality Certification or WI Certified Compliance Program label to Shop Drawings.

C. Samples: For each exposed product and for each color and texture specified.

1.03 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer and installer.

1.04 CLOSEOUT SUBMITTALS

A. Quality Standard Compliance Certificates: AWI Quality Certification Program and WI Certified Compliance Program certificates.

1.05 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

1. Manufacturer's Certification: Licensed participant in AWI's Quality Certification Program or Licensed participant in WI's Certified Compliance Program.

B. Installer Qualifications: Manufacturer of products, Licensed participant in AWI's Quality Certification Program or Licensed participant in WI's Certified Compliance Program.

PART 2 - PRODUCTS

2.01 ARCHITECTURAL CABINET MANUFACTURERS

A. Manufacturers: Local, regional or national firms meeting qualification requirements.

2.02 PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

A. Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for grades of cabinets indicated for construction, finishes, installation, and other requirements.

1. Provide labels and certificates from AWI or WI certification program indicating that woodwork complies with requirements of grades specified.

B. Architectural Woodwork Standards Grade: Custom.

C. Type of Construction: Frameless

D. Door and Drawer-Front Style: Flush or reveal overlay.

1. Reveal Dimension: 1/2 inch

E. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by quality standard.

1. Formica
2. Nevamar
3. Pionite
4. Wilson Art

F. Laminate Cladding for Exposed Surfaces:

1. Horizontal Surfaces: Grade HGS.
2. Vertical Surfaces: Grade HGS.
3. Edges: PVC edge banding, 0.12 inch (3 mm) thick, matching laminate in color.

G. Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces: High-pressure decorative laminate, NEMA LD 3, Grade BKL.

H. Drawer Construction: Fabricate with exposed fronts fastened to sub-front with mounting screws from interior of body.

1. Join sub-Fronts, backs, and sides with glued rabbeted joints supplemented by mechanical fasteners or glued dovetail joints.

I. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

1. As indicated by laminate manufacturer's designations.
2. Match Engineer's sample.
3. As selected by Engineer from laminate manufacturer's full range in the following categories:
    a. Solid colors, matte finish.
    b. Solid colors with core same color as surface, matte finish.
    c. Wood grains, matte finish.
    d. Patterns, matte finish.

2.03 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of architectural cabinet and quality grade specified unless otherwise indicated.

1. Wood Moisture Content: 5 to 10 percent.

B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of architectural cabinet and quality grade specified

1. Medium-Density Fiberboard (MDF): ANSI A208.2, Grade 130
2. Particleboard: ANSI A208.1, Grade M-2-Exterior Glue.
3. Straw-Based Particleboard: ANSI A208.1, Grade M-2, except for density.
4. Softwood Plywood: DOC PS 1, medium-density overlay.
5. Thermoset Decorative Panels: Particleboard or MDF finished with thermally fused, melamine-impregnated decorative paper and complying with requirements of NEMA LD 3, Grade VGL, for Test Methods 3.3, 3.4, 3.6, 3.8, and 3.10.

2.04 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.

B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening, self-closing.

C. Back-Mounted Pulls: BHMA A156.9, B02011.

D. Wire Pulls: Back mounted, solid metal 4 inches (100 mm) long, 5/16 inch (8 mm) in diameter.

E. Catches: Magnetic catches, BHMA A156.9, B03141.

F. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

G. Shelf Rests: BHMA A156.9, B04013; metal.

H. Drawer Slides: BHMA A156.9.

1. Grade 1 and Grade 2: Side- mounted and extending under bottom edge of drawer].
    a. Type: Full extension.
    b. Material: Zinc-plated steel with polymer rollers.
2. Grade 1HD-100 and Grade 1HD-200: Side mounted; full extension type; zinc-plated-steel ball-bearing slides.
3. For drawers not more than 3 inches (75 mm) high and not more than 24 inches (600 mm) wide, provide Grade 2
4. For drawers more than 3 inches (75 mm) high, but not more than 6 inches (150 mm) high and not more than 24 inches (600 mm) wide, provide Grade 1
5. For drawers more than 6 inches (150 mm) high or more than 24 inches (600 mm) wide, provide Grade 1HD-100
6. Pencil drawers: Molded plastic with steel ball bearing side-mount slides and removable shelf.

I. Door and Drawer Silencers: BHMA A156.16, L03011.

J. Grommets for Cable Passage: 3-inch OD, molded-plastic grommets and matching plastic caps with slot for wire passage.

1. Color: Black

K. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

1. Satin Stainless Steel: BHMA 630.

L. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.05 COUNTERTOPS FOR CABINETS AND WORK SURFACES

A. Core Material: 1” thick MDF - typical panel width 2 feet. Lengths vary - refer to drawings.

B. Exposed edges: 3mm PVC applied with Manufacturer’s recommended hot glue adhesive and matching laminate color. PVC edge band may be applied such that where countertop panels are installed perpendicular to each other, the PVC edge band may continue through to allow countertops to be moved.

C. Countertop Hardware: Contractor may utilize any combination of the following support types:

1. Flat galvanized sheet metal undercounter-mount plates for joining countertop sections - (2) per joint.

2. Aluminum angles - 3/8”x1”x1” for use with wood screws (refer to plans)

3. Galvanized sheet metal “L”-shaped handy brackets for securing countertops to wood ledgers.

2.06 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln-dried to less than 15 percent moisture content.

B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.

1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.07 FABRICATION

A. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

B. Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Provide openings in cabinet backs where existing outlet box, J-box or communications boxes are present. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

PART 3 - EXECUTION

3.01 INSTALLATION OF CABINETS AND COUNTERTOPS

A. Before installation, condition cabinets to humidity conditions in installation areas for not less than 72 hours.

B. Architectural Woodwork Standards Grade: Install cabinets to comply with quality standard grade of item to be installed.

C. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with wafer-head cabinet installation screws.

D. Install cabinets level, plumb, and true in line to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm) using concealed shims.

1. Scribe and cut cabinets and countertops to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

2. Install cabinets without distortion so doors and drawers fit openings and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

3. Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches (400 mm) o.c. with No. 10 wafer sheet metal screws through metal backing or metal framing behind wall finish or toggle bolts through metal backing or metal framing behind wall finish.

E. Countertop Installation:

1. Layout countertop sections to span between supports. Countertop sections shall not end farther than 6” from points of support. Where countertops terminate at taller cabinet, provide ledger on cabinet face for top support.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Glass-fiber blanket.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.03 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Research reports.

PART 2 - PRODUCTS

2.01 GLASS-FIBER BLANKET

A. Insulation shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers.

B. Glass-Fiber Blanket, Unfaced: ASTM C665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E84; passing ASTM E136 for combustion characteristics.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. CertainTeed Corporation.

b. Johns Manville; a Berkshire Hathaway company.

c. Knauf Insulation.

2.02 ACCESSORIES

A. Insulation for Miscellaneous Voids:

1. Glass-Fiber Insulation: ASTM C764, Type II, loose fill; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E84.

B. Insulation Anchors, Spindles, and Standoffs: As recommended by manufacturer.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

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

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

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

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

3.02 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

A. Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.

2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.

3. Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.

4. For metal-framed wall cavities where cavity heights exceed 96 inches, support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.

5. For wood-framed construction, install blankets according to ASTM C1320 and as follows:

B. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Glass-Fiber Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft..

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Mildew-resistant joint sealants.
2. Latex joint sealants.

1.02 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product.

B. Samples: For each kind and color of joint sealant required.

C. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

1.03 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Field-adhesion-test reports.

C. Sample warranties.

1.04 PRECONSTRUCTION TESTING

A. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521. Testing to be witnessed and verified by the Port.

1.05 WARRANTY

A. Refer to Section 01 77 00, “Closeout Procedures” for Warranty requirements.

PART 2 - PRODUCTS

2.01 JOINT SEALANTS, GENERAL

A. Colors of Exposed Joint Sealants: As selected by Engineer from manufacturer's full range.

2.02 NONSTAINING SILICONE JOINT SEALANTS

A. Non-staining Joint Sealants: No staining of substrates when tested according to ASTM C 1248.

B. Silicone, Non-staining, S, NS, 50, NT: Non-staining, single-component, non-sag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.

2.03 MILDEW-RESISTANT JOINT SEALANT

A. Silicone, mildew resistant, acid curing, S, NS, 25, NT

2.04 PAINTERS CAULK

A. Acrylic Latex or Siliconized acrylic recommended for indoor or outdoor use.

B. Use product recommended by Paint Manufacturer or one of the following:

1. Red Devil
2. DAP
3. Titebond

2.05 JOINT-SEALANT BACKING

A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.06 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.01 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove laitance and form-release agents from concrete.
2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces.

3.02 INSTALLATION OF JOINT SEALANTS

A. General: Comply with ASTM C 1193 and joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

3.03 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces

1. Joint Locations:

a. Joints between plumbing fixtures and adjoining walls, floors, and counters.

2. Joint Sealant: Silicone, mildew resistant, acid curing, S, NS, 25, NT
3. Joint-Sealant Color: As selected by Engineer from manufacturer's full range of colors.

B. Joint Sealant Application: Painter’s Caulk for sealing around materials immediately adjacent to painted gypsum wallboard.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Patching of interior gypsum board on floors 4, 3 and 2 as required for a complete finished installation.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.01 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.02 INTERIOR GYPSUM BOARD

A. Gypsum Wallboard: ASTM C 1396/C 1396M.

1. Thickness: 5/8 inch.
2. Long Edges: Tapered.
3. Type X only.

2.03 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: aluminum-coated steel sheet - paper-faced.
2. Shapes:
    a. Cornerbead.
    b. LC-Bead: J-shaped; exposed long flange receives joint compound.
    c. L-Bead: L-shaped; exposed long flange receives joint compound.
    d. U-Bead: J-shaped; exposed short flange does not receive joint compound.

2.04 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.

C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping or drying-type, all-purpose compound.
    a. Use setting-type compound for installing paper-faced metal trim accessories.

3. Fill Coat: For second coat, use setting-type, sandable topping or drying-type, all-purpose compound.
4. Finish Coat: For third coat, use setting-type, sandable topping or drying-type, all-purpose compound.

2.05 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.

B. Sound-Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

C. Acoustical Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

D. Thermal Insulation: As specified in Section 07 21 00 "Thermal Insulation."

PART 3 - EXECUTION

3.01 DEMOLITION

A. Coordinate any demolition required with plumbing and electrical trades.

B. Minimize extent of demolition in occupied floors.

C. Protect occupants and finished spaces from dust and debris by isolating work areas and coordinating schedule with Port’s Engineer.

D. Remove and legally dispose of all debris and construction waste.

3.02 APPLYING AND FINISHING PANELS

A. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

B. Comply with ASTM C 840.

C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

D. For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

E. Prefill open joints, or beveled edges, and damaged surface areas.

F. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

G. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 4: Typical all locations

a. Primer and its application to surfaces are specified in Section 09 91 23 "Interior Painting."

3.03 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.

C. Protect finished spaces and surfaces using floor tarps, sheet plastic screens.

D. Sanding joint filler on occupied floors shall be accomplished using wire screen with filtered vacuums. Isolate occupied spaces from this activity.

E. Provide thorough cleaning of all surfaces prior to painting.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Thermoset-rubber base.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified.

PART 2 - PRODUCTS

2.01 THERMOSET-RUBBER BASE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following or approved equal:

1. Burke Mercer Flooring Products; a division of Burke Industries Inc.

2. Flexco.

3. Johnsonite; a Tarkett company.

B. Product Standard: ASTM F 1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).

1. Style and Location:

a. Style B, Cove: Provide where indicated.

C. Thickness: 0.125 inch (3.2 mm).

D. Height: 4 inches (102 mm)

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Job formed or preformed.

G. Inside Corners: Job formed or preformed.

H. Colors: As selected by architect from manufacturer’s full product line.

PART 3 - EXECUTION

3.01 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates for Resilient Stair Accessories: Prepare horizontal surfaces according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.

2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install resilient products until materials are the same temperature as space where they are to be installed.

E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.02 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. Preformed Corners: Install preformed corners before installing straight pieces.

G. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches (76 mm) in length.

    a. Form without producing discoloration (whitening) at bends.

2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches (76 mm) in length.

    a. Miter or cope corners to minimize open joints.

3.03 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

3.04 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes modular carpet tile.

1.02 PREINSTALLATION MEETINGS

A. Pre-installation Conference: Conduct conference at Project site after removal of existing floor finish.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For carpet tile installation, plans showing the following:

1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.
2. Carpet tile type, color, and dye lot.
3. Type of subfloor.
4. Type of installation.
5. Pattern of installation.
6. Pattern type, location, and direction.
7. Pile direction.
8. Type, color, and location of insets and borders.
9. Type, color, and location of edge, transition, and other accessory strips.
10. Transition details to other flooring materials.

C. Samples: For each exposed product and for each color and texture required.

1.04 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Sample warranty.

1.05 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: Certified by the International Certified Floorcovering Installers Association at the Commercial II certification level.

1.07 WARRANTY

A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 CARPET TILE “A” (WALK-OFF CARPET TILE)

A. Basis of Design: Shaw Contract Groups’:
   1. Style: Entrée tile 5T033 (Steppin Out Collection)
   2. Color: Black Chocolate 031751 Size: 24” x 24”
   3. Pattern: Monolithic

B. Manufacturer’s offering similar products meeting requirements include the following or approved equal:
   1. Mannington Mills
   2. Miliken & Co.
   3. The Mohawk Group
   4. Philadelphia Commercial
   5. Shaw Contract Groups

C. Construction: Needlebond diagonal.

D. Backing: Ecoworx tile

E. Dye method: solution dyed

F. Tufted weight: 44.5 oz/yd2

G. Warranty: lifetime limited

2.02 CARPET TILE “B” (FIELD CARPET TILE)

A. Basis of Design: Shaw Contract Groups’:
   1. Style: Construct tile 5T104
   2. Color: Cut up 03740 (brown linear patterns)
   3. Size: 24” x 24”
   4. Pattern: Monolithic

B. Manufacturer’s offering similar products meeting requirements include the following or approved equal:
   1. Mannington Mills
   2. Miliken & Co.
   3. The Mohawk Group
   4. Philadelphia Commercial
   5. Shaw Contract Groups

C. Construction: multi-level pattern loop

D. Backing: Thermoplastic polyolefin with fiberglass reinforcing layer

E. Dye method: solution dyed

F. Tufted weight: 18 oz/yd2

G. Warranty: lifetime limited

2.03 INSTALLATION ACCESSORIES

A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.

B. Adhesives: Water-resistant, mildew-resistant, non-staining, pressure-sensitive type to suit products and subfloor conditions indicated, that comply with flammability requirements for installed carpet tile, and are recommended by carpet tile manufacturer for releasable installation.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine all surfaces scheduled to receive carpet tile.

B. Verify that leveling and patching compound is dry, sound, level, and free of sharp edges or ridges and that surfaces are clean and dust-free.

C. Do not proceed with installation until surface meets Carpet Manufacturer’s and Adhesive Manufacturer’s written requirements.

3.02 PREPARATION

A. General: Comply with CRI's "CRI Carpet Installation Standards" and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile.

B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch (3 mm) wide or wider, and protrusions more than 1/32 inch (0.8 mm) unless more stringent requirements are required by manufacturer's written instructions.

C. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

3.03 INSTALLATION

A. General: Comply with CRI's "CRI Carpet Installation Standard," Section 18, "Modular Carpet" and with carpet tile manufacturer's written installation instructions.

B. Installation Method: As recommended in writing by carpet tile manufacturer.

C. Maintain dye-lot integrity. Do not mix dye lots in same area.

D. Maintain pile-direction patterns.

E. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.

F. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.

G. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on carpet tile as marked on subfloor. Use nonpermanent, non-staining marking device.

H. Install pattern parallel to walls and borders.

I. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Gypsum board walls, ceilings and soffits.

1.02 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.

B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.

C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.

D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.

E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D523.

F. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D523.

G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D523.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

B. Samples: For each type of paint system and in each color and gloss of topcoat.

PART 2 - PRODUCTS

2.01 SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE THE FOLLOWING OR APPROVED EQUAL:

A. Benjamin Moore

B. Glidden

C. Kelly-Moore

D. PPG

E. Sherwin Williams

2.02 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: As selected by Engineer from manufacturer's full range.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Gypsum Board: 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.02 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

3.03 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.04 INTERIOR PAINTING SCHEDULE

A. Gypsum Board Substrates:

1. High-Performance Architectural Latex System **MPI INT 9.2B**:

a. Prime Coat: Primer sealer, latex, interior, **MPI #50**.

b. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.

c. Topcoat: Latex, interior, high performance architectural, semi-gloss (MPI Gloss Level 5), **MPI #141**.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Refrigeration appliances.

1.02 ACTION SUBMITTALS

A. Product Data: For each product.

1.03 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Sample warranties.

1.04 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.05 WARRANTY

A. Special Warranties: Manufacturer agrees to repair or replace residential appliances or components that fail in materials or workmanship within specified warranty period.

1. Warranty Period: one year from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Electrical Appliances: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Energy Star rating required.

2.02 MANUFACTURERS

A. Manufacturers listed provide products meeting specifications. Other manufacturers may submit similar products for possible approval:

1. G.E.
2. Maytag
3. U Line

2.03 REFRIGERATOR/FREEZERS

A. Refrigerator/Freezer

1. Undercounter.
2. Storage Capacity:
    a. Refrigeration Compartment Volume: 5.1 cf.
    b. Freezer Volume: 0.5 cf.
3. General Features:
    a. Interior light in refrigeration compartment.
    b. Manual defrost.

c. Interior light in freezer compartment.

d. Leveling legs

e. Reversing door

f. Glass and wire shelving

g. Recessed handle

h. In-door can rack

i. Stainless steel face

j. Mini ice trays, defrost tray

4. Size:

a. 34-1/8” H x 23-2/4” D x 25-5/8” W

5. ENERGY STAR: Provide appliances that qualify for the EPA/DOE ENERGY STAR product-labeling program.

2.04 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Perform visual, mechanical, and electrical inspection and testing for each appliance according to manufacturers' written recommendations. Certify compliance with each manufacturer's appliance-performance parameters.

2. Operational Test: After installation, start units to confirm proper operation.

3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and components.

4. Confirm unit is installed level.

B. An appliance will be considered defective if it does not pass tests and inspections.

PART 3 - EXECUTION (NOT USED)

END OF SECTION

1.01 SUMMARY

A. Section Includes:

1. Under-counter Pedestal File Cabinets
2. Adjustable Counter-mount Standing Desk (Ergonomic Desk)

1.02 ACTION SUBMITTALS

A. Product Data: For each product.

1.03 CLOSEOUT SUBMITTALS

A. Manufacturer's Warranty

PART 2 - PRODUCTS

2.01 PEDESTAL 3-DRAWER FILE CABINET

A. Manufacturers: Approved Manufacturers include but are not limited to the following:

1. Global
2. Haworth
3. HON Office Furniture
4. Kimball Office
5. Steelcase

B. Construction/components:

1. Factory-painted steel
2. Stainless steel drawer pulls
3. Drawer guides: side-mounted roller bearing type - full extension for file drawer and ¾ extension on upper drawers.
4. File drawer designed to support hanging files for 8-1/2" x 11" documents.
5. Plastic sliding tray in upper drawers.

C. Dimensions:

1. Height: 27-1/2"
2. Width: 14-3/4"
3. Depth: 22-3/4"

D. Color: As selected by Engineer from Manufacturer's standard colors.

2.02 ERGONOMIC DESK (NO SUBSTITUTIONS)

A. Manufacturer: Varidesk

B. Product: ProPlus 36 Black (countertop-mounted)

C. Assembly - fully assembled

D. Dual-monitor support

E. 11 height settings

F. Spring-assisted lift

G. Footprint: 36” W x 29.75 D

PART 3 - EXECUTION (NOT USED)

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Work includes complete mechanical systems indicated on the drawings and specified. The Bid and Contract Documents and General Requirements of the specification are a part of this division of the specification. Where the word “provide” is used, it means “furnish and install complete and ready for use.” Provide supervision, labor, material, equipment, and machinery necessary to complete the mechanical systems. Provide finished work, tested and ready for operation.

B. Valves

1.02 RELATED WORK

A. All portions of specification Division 01 apply to this work.

B. Additional sections of the mechanical specifications may be required to provide a fully functional system. Refer to the specifications index.

1.03 CODES AND STANDARDS

A. Give necessary notices, obtain permits, and pay taxes, fees, and other costs, including utility connections or extensions for the work. File necessary drawings, prepare documents, and obtain necessary approvals of governmental departments having jurisdiction. Include all costs associated with notices; permits; taxes; fees; utility connections or extensions; government approvals; and other related costs in original bid. Obtain required certificates of inspection for work and deliver to the Engineer before request for acceptance and final payment for the work.

B. Comply with laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Engineer in writing and any necessary changes shall be accomplished by appropriate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without notice to the Engineer, he shall assume full responsibility, and shall bear all costs.

C. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 feet-pound force per cubic foot)

D. Material and equipment within the scope of the UL Testing Laboratory Service shall be listed by the Underwriters Laboratories for the purpose for which they are used and shall bear their listing mark.

1.04 REQUIRED SUBMITTAL DATA FOR THIS SPECIFICATION SECTION

A. Valves

1.05 DRAWINGS

A. Drawings are diagrammatic, indicating the general arrangement of systems and work, and do not attempt to show exact details or all offsets in piping and ductwork. Do not scale drawings. Examine the engineerural drawings for exact location of fixtures and equipment. Where they are not definitely located, obtain this information from the Engineer.

B. Follow drawings in laying out work and check drawings of other trades to verify spaces in which work will be installed. Maintain maximum headroom. If space conditions appear inadequate, notify the Engineer before proceeding with the work. Make reasonable modifications in the

work without extra cost as needed to prevent conflict with work of other trades and for proper execution of the work.

1.06 EQUIPMENT DEVIATIONS

A. Specific manufacturers and model numbers are noted to indicate a standard of design and are not intended to be restrictive.

B. Where the term “or approved equal” is used, alternative and/or substitute products will be considered only prior to the bid date (Prior Approval). Where the term “or equal” is used, approval of alternative and/or substitute products may be requested by the contractor after the bid date. Submittal, review, and potential approval of alternative and/or substitute products will be considered and executed only under terms and conditions specified in Division 01.

C. When submitting an alternative and/or substitute product, Contractor shall include complete product literature of original specified item.

D. Provide redesign to any part of the work resulting from the use of equipment and material other than specified or indicated on the drawings. Obtain approval of redesign from the Engineer. Redesign cost and additional construction cost resulting from the redesign shall be at the Contractor’s expense.

PART 2 - PRODUCT

2.01 GENERAL

A. Manufacturers

1. Apollo
2. Nibco
3. Milwaukee
4. Crane
5. Stockham
6. Velan
7. Powell
8. Watts
9. Or Approved Equal

B. Provide valves of same manufacturer throughout where possible.

C. Provide valves with manufacturer’s name and pressure rating clearly marked on outside of body.

D. All valves intended for domestic water systems shall have NSF rating for the application for which they are to be used.

E. Provide valves suitable to connect to adjoining piping as specified for pipe joints. Use pipe size valves, unless indicated otherwise.

F. Thread pipe sizes 2-inches and smaller.

G. Solder or thread-to-solder adapters for copper tubing.

2.02 BALL VALVES

A. 2-Inches and Smaller: Two-piece cast bronze body and end-piece ASTM B584 (alloy shall contain no more than 15% zinc), full port Solid B16 Chrome Plated brass ball, blowout proof; B16 brass stem, Teflon seats and seals, threaded ends, 600 pounds per square inch cold working pressure, Class 150. Where piping is insulated, valves shall be provided with 2-inch extended handles of non-thermal conductive material and a protective sleeve that allows operation of the valve without breaking the vapor seal or disturbing the insulation. Provide with memory stops, which are fully adjustable after insulation is applied.

PART 3 - EXECUTION

3.01 COOPERATION WITH OTHER TRADES

A. Furnish to other trades necessary templates, patterns, setting drawings and shop details for the proper installation of work and for coordinating adjacent work.

3.02 SAFETY

A. The Engineer has not been retained to provide design and construction services relation to the Contractor's safety precautions, or to means, methods, techniques, sequences, or procedures required for the Contractor to perform his work. The Contractor is solely and completely responsible for conditions of the job site, including safety of persons and property during performance of work. This requirement applies continuously and is not limited to normal working hours. Comply with "Safety and Health Regulations for Construction," Volume 36, No. 75, Part II of the Federal Register by the US Department of Labor. Provide required safety measures and consult with the state or federal safety inspector for interpretation whenever in doubt as to whether safe conditions do or do not exist or whether compliance with state or federal regulations exists.

3.03 PROTECTION

A. Protect work and material from damage and be liable for damage.

B. Be responsible for work and equipment until finally inspected, tested, and accepted; protect work against theft, injury, or damage; and carefully store material and equipment received on site which are not immediately installed. Close open ends of work with temporary covers or plugs during storage and construction to prevent entry of obstructing material.

3.04 SCAFFOLDING, RIGGING, AND HOISTING

A. Provide ladders, scaffolding, rigging, hoisting, and services necessary for delivery into the premises and erection of any equipment and apparatus and execution for the work. Remove such items from premises when no longer required.

3.05 MATERIAL AND WORKMANSHIP

A. Materials and equipment required for the work shall be new and shall be furnished, delivered, erected, installed, connected, and finished in every detail; and shall be selected and arranged to fit properly into the building spaces. Where no specific kind or quality of material is given, an article as approved by the Engineer shall be provided.

B. Furnish the services of an experienced superintendent, who shall be constantly in charge of the work.

C. Equipment and materials shall be installed with the approval of the Engineer in accordance with the recommendations of the manufacturer. This includes the performance of such tests as the manufacturer recommends.

D. Provide equipment in the midrange of written performance documentation to allow for adjustment.

3.06 ACCESSIBILITY

A. Install the work with adequate clearances throughout the project, including being responsible for the sufficiency of the size of shafts, chases, double partitions, and suspended ceilings. Cooperate with other trades where work is in the same space. Such spaces and clearances shall be kept to the minimum size required.

B. Locate all equipment which must be serviced, operated, or maintained in fully accessible positions. Minor deviations from drawings may be made to allow for better accessibility and any change shall be approved by the Engineer.

C. The Plumbing Subcontractor shall provide the General Contractor the exact locations of access panels for each concealed valve, control damper or other device requiring service. Access panels will be provided and installed by the General Contractor and as specified in the other divisions of the specifications. Submit locations of these panels to the General Contractor in sufficient time to be installed in the normal course of work.

3.07 CUTTING AND PATCHING

A. Provide drilling, coring, cutting, and patching necessary to install the work specified in this division. Patching shall match adjacent surfaces.

B. No structural members shall be cut without the approval of the Engineer; and cutting shall be done in a manner directed by them. Do not damage or endanger any portion of the project or work of the Owner or any other separate contractor by drilling, coring, cutting, patching, excavating, and backfilling.

C. Inform the General Contractor and other subcontractors affected of requirements for cutting and patching.

3.08 BOXES, SLEEVES, AND CHASES

A. Inform the General Contractor of requirements for boxes, sleeves, and chases. The General Contractor shall set boxes, sleeves, and chases. Furnish General Contractor with the boxes and sleeves and be responsible for informing General Contractor of required location.

3.09 OPERATING INSTRUCTIONS

A. Upon completion of the work, furnish the necessary skilled labor and helpers for operating the systems and equipment for a period of three (3) days of eight (8) hours each, or as otherwise specified. Give at least forty-eight (48) hours' notice to the Engineer in advance of this period. During this period, instruct the Engineer or his representative fully in the operation, adjustment, and maintenance of all equipment furnished. The training of the appropriate maintenance staff for each equipment type and/or system shall include, as a minimum, the following:

1. System/Equipment overview (what it is, what it does and which other systems and/or equipment does it interface with).
2. Review of the available O&M materials.
3. Review of the Record Drawings on the subject system/equipment.
4. Hands-on demonstration of all normal maintenance procedures, normal operating modes, and all emergency shutdown and startup procedures.

3.10 MECHANICAL EQUIPMENT MANUALS

A. Upon completion of the work and prior to acceptance of the mechanical work, prepare servicing manuals in accordance with industry-accepted standards describing the requirements of mechanical equipment provided under this division of the specification.

B. As a minimum, include in the manuals:

1. Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance.
2. Maintenance schedules
3. Manufacturers' operation and maintenance instructions with parts list specific to the equipment installed, with extraneous matter removed or neatly marked out. Routine maintenance actions shall be clearly identified together with supplementary drawings and information where necessary to describe and itemize servicing.
4. Provide a table of contents with all contents listed in an orderly presentation.
5. Manufacturers' printed warranties
6. Names, addresses, and phone numbers of General Contractor, Mechanical Subcontractor(s), and all other related Subcontractors.
7. Names, addresses, and phone numbers of equipment suppliers.
8. Names, addresses, and phone numbers of at least two service agencies.
9. Controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field determined setpoints shall be permanently recorded on control drawings at control devices, or for digital control systems, in programming comments.
10. A complete narrative of how each system is intended to operate. A Sequence of Operation is not acceptable as a narrative for this requirement. Narrative shall include:
    a. A detailed explanation of the original design intent.
    b. The basis of design (how the design was selected to meet the design intent).
    c. A detailed explanation of how new equipment is to interface with existing equipment or systems (where applicable).
    d. Suggested set points.

C. Data in manuals shall be neat, clean copies. Drawings shall be accordion-folded. Manufacturers' advertising literature or catalogs will not be acceptable for operating and maintenance instruction.

D. Place data for the manual in hardcover three-ring loose-leaf notebooks. Label bound edge of notebooks with the name of the building, Owner, name of the project, year of completion and the words "Mechanical Equipment." Label front of notebooks with the name of the Owner, name of the building, name of the project, Owner's project number, date, General Contractor, Mechanical Subcontractor, Engineer, and Mechanical Engineer.

E. Submit one copy of the data in a preliminary draft form to the Engineer for approval prior to preparing finished copies.

F. Provide two (2) copies of the finished manuals to the Engineer.

3.11 RECORD DRAWINGS

A. Within 90 days after the date of system acceptance, provide record drawings of all buildings and plot plans. Record drawings shall include as a minimum the location and performance data on each piece of equipment, general configuration of duct and pipe distribution system, including sizes, and the terminal air and water design flow rates of the actual installation. Record drawings shall also incorporate any mechanical work which deviates from the contract drawings, including changes resulting from addenda, Requests for Information, and Change Orders. Neatly draft changes on clean “hard copy” drawings to show the work clearly in the actual locations as built.

3.12 CLEANING

A. Promptly remove waste material and rubbish caused by the work. At the Completion of the work, clean the dirt and debris from the mechanical installation, including equipment, piping, ductwork, and plumbing fixtures.

3.13 WARRANTY

A. All work, materials, and equipment to be free from defects. Correct all defects and failures occurring within one year from date of substantial completion without cost to the Owner except when such failure is due to neglect or carelessness by the Owner, as determined by the Engineer.

B. The warranty disregards shorter time limits by any manufacturer of equipment provided.

C. Make all necessary adjustments and corrections during first year of operation. The fact that the Engineer was present during any construction does not relieve the Contractor from responsibility for defects discovered after completion of the work.

3.14 ASBESTOS

A. This project may require work in the presence of asbestos fibers. These Division 22 Bid Documents do not provide for or cover the identification, removal, encapsulation, or disposition of such materials. The hazardous building material survey that has been conducted and results that will be provided by the Port. The Contractor is cautioned to obtain all instructions relative to proceeding with the execution of the work under the above circumstances, directly from the Engineer.

3.15 GENERAL INSTALLATION

A. Install all valves with stems upright or horizontal, not inverted.

3.16 VALVE SERVICE

A. Other isolation and shutoff:

1. 2-Inch ang Smaller Valves: Use valves listed under “Ball Valves”

2. VALVE ACCESS

B. Install valves in accessible location to allow for maintenance and removal.

C. Provide chain-guides and chains for valves 4-inches and larger with horizontal centerline of the valve more than 7-feet above the floor. Mount valve horizontally with chain long enough to terminate 4-feet above the floor. Chain operators shall be same manufacturer as the valve.

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Hot and Cold Piping System, Connection to Fixtures and Equipment.

B. Cleaning and Disinfection of Domestic Hot and Cold Systems.

1.02 RELATED WORK

A. All portions of specification Division 01 apply to this work.

B. All portions of specification Section 22 05 00 apply to this work.

C. Additional sections of the mechanical specifications may be required to provide a fully functional system. Refer to the specifications index.

1.03 CODES AND STANDARDS

A. Conform to the current listing of “Approved Cross-connection Control Devices,” Washington State Department of Health.

B. Washington State Energy Code Commercial Provisions, latest adopted version.

C. All standards refer to the current edition.

1. ASME B16.22 - Standard for Wrought Copper and Bronze Solder-Joint Pressure Fittings
2. ASME B16.29 - Standard for Wrought Copper and Wrought Copper Alloy Solder-Joint Drainage Fittings - DWV
3. ASME B16.4 - Standard for Cast-Iron Threaded Fittings Class 125 and 250
4. ASTM A126 - Standard for Gray Iron Castings for Valves, Flanges, and Pipefittings
5. ASTM A47 - Standard for Ferritic Malleable Iron Castings
6. ASTM A74 - Standard for Hub and Spigot Cast-Iron Soil Pipe and Fittings
7. ASTM B16.12 - Standard for Cast-Iron Threaded Drainage Fittings
8. ASTM B75 - Standard for Seamless Copper Tube
9. ASTM B813 - Standard for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube
10. ASTM B828 - Standard for Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings
11. ASTM C564 - Standard for Rubber Gaskets for Cast-Iron Soil Pipe and Fittings.
12. ASTM D2235 - Solvent Cement for ABS Plastic Pipe and Fittings
13. ASTM D2564 - Solvent Cements for PVC Plastic Piping Systems
14. ASTM D2661 - ABS Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
15. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with PVC Pipe and Fittings
16. ASTM D3034 - Type PSM PVC Sewer Pipe and Fittings
17. CISPI No. 301 - Cast-Iron Soil Pipe and Fittings for Hubless Cast-Iron Sanitary System
18. CISPI No. 310 - Couplings for Use in Connection with Hubless Cast-Iron Soil Pipe

19. NSF 61 - Standard for Drinking Water System Components

1.04 REQUIRED SUBMITTAL DATA

A. None.

PART 2 - PRODUCT

2.01 PIPING SYSTEMS

A. All material in conformance with the standards listed in 1.03.

1. Domestic Water Piping (Aboveground)

a. Pipe: Type L hard copper, ASTM B75.

b. Fittings: Wrought copper or bronze soldered, ASME B16.22

B. Waste Piping (Aboveground)

1. Pipe: Service weight coated cast-iron, bell and spigot or no-hub for piping. At Contractor's option and where code permits, ABS pipe or DWV copper drainage tube may be used. ASTM A120, ASTM A74, ASTM B306, and CISPI 301. ASTM D2661

2. Fittings: Service weight coated cast-iron bell and spigot or no-hub fittings, coupling, shields, and clamp assemblies. Wrought copper solder joint drainage fittings for DWV tube. ASTM A74, B16.12, ASME B16.29 and CISPI 310. ABS fittings and solvent for ABS pipe ASTM D2661 and D2235.

C. Vent Piping (Aboveground)

1. Pipe: Service weight coated cast-iron, bell and spigot or no-hub pipe. At Contractor's option, ABS pipe or DWV copper drainage tube may be used, ASTM A53, ASTM A74, ASTM B306, CISPI 301, and ASTM D2661.

2. Fittings: Service weight coated cast-iron bell and spigot or no-hub fittings, couplings, shields, and clamp assemblies. Wrought copper solder joint drainage fittings for DWV tube, ASTM A74, ASTM B16.12, ASME B16.29, and CISPI 310. ABS fittings and solvent for ABS pipe ASTM D2661 and D2235.

2.02 UNIONS

A. Copper tube, Sweat, Nibco #733, Grinnell-ITT #9730, EPC #4733.

B. Dielectric unions, soldered to threaded 2-inch and below, flanged 2½-inch and above. Select gasket for pressure and temperature range of service. Capitol Series CS or F, Epco "Dielectric Union."

2.03 ESCUTCHEON RINGS

A. Chrome-plated split ring type.

B. Deep recessed type on pipes with sleeves through floor which extend above finished floor line to conceal pipe sleeve.

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION REQUIREMENTS

A. Route piping to avoid interference with structure, ceiling supports and framing, lights, and work of other trades. Provide offsets as required.

B. Keep openings in piping and ends of pipe closed during installation.

C. Provide for all expansion, locating offsets and spring pieces where necessary.

D. Elbows shall be long-radius.

E. Change size in piping with reducing couplings; bushings not acceptable.

F. Install all piping parallel with the building and other piping.

G. Cut pipe accurately to measurement established on building and work into place without springing or forcing.

H. Install piping concealed in finished rooms, unless indicated otherwise.

I. Install exposed work neatly and workmanlike; run pipes parallel to the closest wall; maintain maximum headroom; avoid light fixtures.

J. Correct piping leaks immediately; use new materials; leak-sealing compounds or peening not permitted.

K. Piping shall meet the Washington State Energy Code maximum distances for Hot Water Circulation Piping per Section C404 using the Maximum Length or the Maximum Volume method.

3.02 COPPER PIPING JOINTS

Note: Contractor to provide sweated joints in compliance with the method outlined in ASTM B828.

A. Ream thoroughly to remove all burrs.

B. Polish contact surfaces of fittings and pipes with emery cloth, sandpaper, or steel brush, and wipe clean before fluxing male and female surfaces of joints.

1. Steel wool not permitted for polishing.

C. Apply a thin even coating of flux with a brush to both tube and fitting as soon as possible after cleaning.

D. Insert the tube end into fitting cup, making sure that the tube is seated against the base of the fitting cup. Employ a slight twisting motion while inserting tube. Remove excess flux from the exterior of the joint with a cotton rag.

E. Support the tube and fitting assembly to ensure a uniform capillary space around the entire circumference of the joint.

F. Preheat the fitting and tube evenly and Take care to avoid burning the flux.

G. Apply solder to the fitting while concurrently heating the fitting/tube.

1. Water flushable solder for all potable water systems in conformance with the Uniform Plumbing Code and ASTM B813.

H. Provide solder unions, ground joint, or flanged joints where necessary for access to equipment.

3.03 CAST-IRON BELL AND SPIGOT PIPING JOINTS

A. Make joints up with double-sealed elastomeric compression-type gaskets conforming to ASTM C564; or no-hub couplings, shields, and clamp assemblies.

3.04 UNIONS

A. Provide unions at all connections to equipment and where necessary to disconnect for repairs.

B. Use union fittings wherever practicable to save joints.

C. Provide dielectric unions between iron and copper pipe.

3.05 PIPE SEALS AND ESCUTCHEON RINGS

A. At exterior walls, walls below grade, and floor slabs on grade, provide watertight seal. Core drill round opening in existing concrete in accordance with seal manufacturer's recommendations. Install assembly to provide a penetration capable of withstanding a 20-pounds per square inch differential pressure across the seal.

B. At firewall, floor, and roof penetrations, seal annular space at pipes with fire stopping insulation and 2-inch minimum coating of smoke seal.

C. Fill annular space at all other piping penetrations with fiberglass batt insulation to a compressed fit.

D. Provide escutcheon rings for all exposed uninsulated pipes passing through walls, floors, and ceilings.

3.06 TESTING

A. Upon completion of roughing-in and before setting fixtures, test hot and cold water system at 150 pounds per square inch hydrostatic. Hold test for a minimum of thirty (30) minutes.

B. If a portion of piping is to be concealed before finishing, this portion shall be tested separately.

C. If test shows leak or defect, repair by remaking with new material, and retest.

D. Port to witness all testing.

3.07 CLEANING AND CHLORINATION OF POTABLE WATER PIPING

A. Initial Flushing: All domestic water piping shall be thoroughly flushed so that it is free from scale, sediment, construction debris, etc. Minimum flushing velocity shall be 2.5-feet-per second.

B. Final Flushing: On completion of installation and testing of the potable water systems, pre-flush, chlorinate with Sodium Hypochlorite to AWWA C651 specifications and let stand for 24 hours. Open and close valves to assure complete chlorination. Thoroughly flush again until flush water meets AWWA standards and refill the pipeline.

C. Independent Inspection: Retain an independent inspection firm to supervise and inspect the chlorination and flushing procedures and perform chemical tests as required. Pace Solutions Inc., IAT Construction Services, or approved equal.

D. Certificate: Submit to the Engineer, a certificate from the testing firm, stating that the chlorination and flushing have been successfully carried out.

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Soil, waste, and vent piping connection to fixtures.

1.02 RELATED WORK

A. All portions of specification Division 1 apply to this work.

B. All portions of specification Section 22 05 00 apply to this work.

C. Additional sections of the mechanical specifications may be required to provide a fully functional system. Refer to the specifications index.

1.03 CODES AND STANDARDS

A. Comply with the version of the Uniform Plumbing Code of the IAPMO most recently adopted and as amended by the Authority Having Jurisdiction (AHJ).

1.04 REQUIRED SUBMITTAL DATA

A. None

PART 2 - PRODUCT

2.01 VENTS

A. Vent piping shall be same material as soil and waste piping.

PART 3 - EXECUTION

3.01 INSTALLATION

A. PIPING

1. Install all horizontal sanitary, drainage, downspout, and vent piping with a minimum slope of ¼-inch per foot of length.

2. Install piping in suspended ceiling areas, to be above the finished ceiling height called for on the Architectural drawings. Exposed piping areas, maintain maximum headroom.

3. Make flashing permanently watertight.

4. Provide cleanouts the same size as pipe, except that cleanouts larger than 4-inch not required.

5. Provide test tee at the foot of all soil and waste risers and on each building drain outside of building.

6. Provide cleanouts in soil and waste pipes with floor or wall plates as required, flush with finished wall or floor. Provide cleanouts in accordance with the Uniform Plumbing Code “Drainage System” chapter, in vertical waste pipe at each sink immediately below trap arm and where indicated on the drawings.

7. Provide vent for each trap, unless noted otherwise.

8. Terminate vents above the roof at least 10-feet-0-inch from any opening to the building.

3.02 TESTING

A. Plug all openings and fill the entire system with water to highest vent stack above roof. If the system is tested in sections, no section shall be tested with less than a 10-feet head of water. Hold test for 4-hours. Verified by Port.

B. Repair joints and replace defective fittings or pipe, and retest.

C. Final test may be required by either the Plumbing Inspector or Engineer using 2-ounces of oil of peppermint introduced into each line or stack, or as required by ordinances.

D. Records: The Contractor shall keep a record of each test, initialed by test witnesses, in a logbook which is available on site for inspection; copies delivered to the Engineer at job completion.

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

A. This section includes plumbing fixtures, associated trim, and fittings necessary to make a complete installation from wall or floor connections to rough piping, and certain accessories. It includes the following conventional plumbing fixtures and related components:

1. Faucets
    a. Sink Faucets
2. Sinks
    a. Kitchen Sinks
3. Valves
    a. Thermostatic Mixing Valves
4. Water Filters

1.02 RELATED WORK

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

1.03 CODES AND STANDARDS

A. Comply with requirements in ICC/ANSI A117.1, “Accessible and Usable Buildings and Facilities” and “Americans with Disabilities Act” for plumbing fixtures for people with disabilities.

B. Comply with requirements in US Public Law 102-486, “Energy Policy Act,” for water flow and consumption rates for plumbing fixtures.

C. Comply with the requirements of the most recently adopted version of the Uniform Plumbing Code (IAPMO) and as amended by the Authority Having Jurisdiction.

1. NSF Standard: Comply with NSF 61, “Drinking Water System Components - Health Effects,” for fixture materials that will be in contact with potable water.
2. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.

D. Comply with the following applicable standards and other requirements specified for plumbing fixtures:

1. Stainless Steel Residential Sinks: ASME A112.19.3.
2. Comply with the following applicable standards and other requirements specified for faucets:
3. Faucets: ASME A112.18.1.
4. NSF Potable-Water Materials: NSF 61.
5. Pipe Threads: ASME B1.20.1.
6. Supply Fittings: ASME A112.18.1.
7. Brass Waste Fittings: ASME A112.18.2.
8. Combination, Pressure-Equalizing and Thermostatic-Control Antiscald Faucets: ASSE 1016.

9. Manual-Control Antiscald Faucets: ASTM F444.
10. Pressure-Equalizing-Control Antiscald Faucets: ASTM F444 and ASSE 1016.
11. Thermostatic-Control Antiscald Faucets: ASTM F444 and ASSE 1016.

E. Comply with the following applicable standards and other requirements specified for miscellaneous fittings and components:

1. Flexible Water Connectors: ASME A112.18.6.
2. Off-Floor Fixture Supports: ASME A112.6.1M.
3. Pipe Threads: ASME B1.20.1.
4. Supply and Drain Protective Shielding Guards: ICC A117.1.
5. Point of Use Thermostatic Water Mixing Valves: ASSE 1070 and/or CSA B125.3
6. Required submittal data

F. Product Data: For each type of plumbing fixture indicated. Include selected fixture and trim, fittings, accessories, appliances, appurtenances, equipment, and supports. Indicate materials and finishes, dimensions, construction details, and flow-control rates.

1.04 DEFINITIONS

A. ABS: Acrylonitrile-Butadiene-Styrene Plastic.

B. Accessible Fixture: Plumbing fixture that can be approached, entered, and used by people with disabilities.

C. Cast Polymer: Cast-filled-polymer-plastic material. This material includes cultured-marble and solid-surface materials.

D. Cultured Marble: Cast-filled-polymer-plastic material with surface coating.

E. Fitting: Device that controls the flow of water into or out of the plumbing fixture. Fittings specified in this Section include supplies and stops; faucets and spouts; showerheads and tub spouts; drains and tailpieces; and traps and waste pipes. Piping and general-duty valves are included where indicated.

F. FRP: Fiberglass-reinforced plastic.

G. PMMA: Polymethyl methacrylate (acrylic) plastic.

H. PVC: Polyvinylchloride plastic.

I. Solid Surface: Nonporous, homogeneous, cast-polymer-plastic material with heat-, impact-, scratch-, and stain-resistance qualities.

1.05 QUALITY ASSURANCE

A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.

1.06 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Faucet Washers and O-Rings: Equal to 10 percent of amount of each type and size installed, but no fewer than two (2) of each type.

PART 2 - PRODUCTS

2.01 FAUCETS

A. Sink Faucets

1. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on the drawings or equal.

a. Description: Single-control or two-handle mixing valve. Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture holes; coordinate outlet with non-integral spout, if applicable.

1) Body Material: Solid brass

2) Finish: Polished or rough chrome plated.

2.02 SINKS

A. Kitchen Sinks

1. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on the drawings or equal.

2. Description: One-compartment, counter-mounted, enameled cast-iron or stainless-steel fixture.

2.03 WATER FILTERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on the drawings or equal.

B. Description: Wall or floor-mounted cartridge-type assemblies suitable for potable water with stainless-steel or plastic housing, fittings, and pleated-polypropylene or wound-fiber filter cartridge with 10-micron removable rating.

2.04 WATER TEMPERING VALVES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work are the following, or equal:

1. Sparco, Inc.

2. Watts Industries, Inc.; Water Products Div.

B. Description: Manually adjustable, thermostatically controlled piston or disc water tempering valve; rough bronze body with threaded inlet and outlet; and adjustable temperature setting capable of limited anti-scald protection.

2.05 MISCELLANEOUS PIPING SPECIALTIES

A. Stops: Chrome plated, ¼ turn, keyed, angle stop, compliant with ANSI 61-9. Fitting connection to match size and type of upstream piping.

B. Supplies: Braided stainless steel, fittings to match fixture and upstream connections; length to match installation requirements to within 6 inches. Compliant with ANSI 61-9.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.

B. Examine cabinets, counters, floors, and walls for suitable conditions where fixtures will be installed.

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

3.02 INSTALLATION

A. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written instructions.

1. Install counter-mounting fixtures in and attached to casework.
2. Install fixtures level and plumb according to roughing-in drawings.
3. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
    a. Install trap and tubular waste piping on drain outlet of each fixture to be directly connected to sanitary drainage system.
4. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
5. Install traps on fixture outlets.
    a. Install escutcheons at piping-wall ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding fittings. Escutcheons are specified in Division 22 Section "Plumbing Piping"
6. Seal joints between fixtures and walls, floors, and countertops using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Sealants are specified in Division 07 Section "Joint Sealants."
7. Install dielectric fitting in supply piping to fixture if piping and fixture connections are constructed of different metals. Refer to Division 22 Section "Plumbing Piping" for piping.
8. Use chrome-plated brass or copper tube, fittings, and valves in locations exposed to view. Plain copper tube, fittings, and valves may be used in concealed locations.

3.03 CONNECTIONS

A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

C. Ground equipment according to Division 26 Section 26 05 26.

1. Connect wiring according to Division 26 Section 26 05 19.
2. Connect hot- and cold-water-supply piping to hot- and cold-water-tempering equipment. Connect output form water-tempering equipment to emergency plumbing fixtures.

3. Ground equipment.
4. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.04 FIELD QUALITY CONTROL

A. Contractor to verify that installed plumbing fixtures are categories and types specified for locations where installed.
   1. Check that plumbing fixtures are complete with trim, faucets, fittings, and other specified components.
   2. Inspect installed plumbing fixtures for damage. Replace damaged fixtures and components.
   3. Install fresh batteries in sensor-operated mechanisms.
   4. Mechanical-Component Testing: After plumbing connections have been made, test for compliance with requirements. Verify ability to achieve indicated capacities and temperatures. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.
   5. Electrical-Component Testing: After electrical circuitry has been energized, test for compliance with requirements.
      a. Test and adjust controls and safeties.
   6. Report test results in writing.

3.05 ADJUSTING

A. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
B. Adjust metered ADA faucets to flow for no less than 10 seconds.
C. Operate and adjust disposers and hot-water dispensers. Replace damaged and malfunctioning units.
D. Adjust water pressure at faucets and flushometer valves to produce proper flow and stream.
   1. Replace washers and seals of leaking and dripping faucets and stops.
   2. Install fresh batteries in sensor-operated mechanisms.
   3. Adjust or replace fixture flow regulators for proper flow and stream height.
   4. Adjust equipment temperature settings.

3.06 CLEANING

A. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Do the following:
   1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and spouts.
   2. Remove sediment and debris from drains.

B. After completing installation of exposed, factory-finished fixtures, faucets, and fittings, inspect exposed finishes and repair damaged finishes.

3.07 PROTECTION

A. Provide protective covering for installed fixtures and fittings.

B. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Engineer.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Scope

1. This section specifies general requirements for electrical work. Detailed requirements for specific electrical items are specified in other sections, but are subject to the general requirements of this section. The electrical drawings and schedules included in this project manual are functional in nature and do not specify exact locations of equipment or equipment terminations.

2. The Contractor shall examine all mechanical and civil drawings and Specifications to determine actual locations, sizes, materials, and ratings of all equipment provided by others.

B. Definitions

1. Provide: Furnish and install.

2. Contractor: The party who furnishes and installs all tools, materials, and equipment to complete the work shown and implied in the drawings and these Specifications. This includes the Prime Contractor, the Electrical Contractor, Control System Integrator, and all other Contractors and Subcontractors.

3. Control System: All equipment, instruments, and wiring for control and monitoring of all operating equipment. This shall also include custom control panels, packaged control panels, and control equipment furnished with other systems and mechanical equipment. All sensing, transmitting, indicating, control and recording of all functions as specified and shown shall also be included in the control system.

4. Elementary or Schematic or Control Diagram: Shows, by means of graphic symbols, the electrical connections and functions of a specific circuit arrangement. The schematic diagram shows all circuit functions without regard to the actual physical size, shape, or location of the component devices or parts.

5. Single-Line Diagram/ One-Line Diagram: Shows, by means of lines and graphical symbols, the course of the electrical distribution system and the components, devices, or parts used therein.

6. Wiring Diagram or Connection Schematic: Includes all of the devices in a system and shows their physical relationship to each other, including terminals and interconnecting wiring in assembly. This diagram shall be (a) in a form showing interconnecting wiring only by terminal designation (wireless diagram), or (b) a panel layout diagram showing the physical location of devices plus the elementary diagram.

7. Interconnection Diagram: Shows all external connections between terminals of equipment and outside points, such as motors and auxiliary devices. References shall be shown to all connection diagrams that interface to the interconnection diagrams. Interconnection diagrams shall be of the continuous line type. Bundled wires shall be shown as a single line with the direction of entry / exit of the individual wires clearly shown. Each wire identification as actually installed shall be shown. The wire identification for each end of the same wire shall be identical. All devices and equipment shall be identified. Terminal blocks shall be shown as actually installed and identified in the equipment complete with individual terminal identification. All jumpers, shielding and grounding termination details not shown on the equipment connection diagrams shall be shown on the interconnection diagrams. Wires or jumpers shown on the equipment connection diagrams shall not be

shown again on the interconnection diagram. Signal and DC circuit polarities and wire pairs shall be shown. Spare wires and cables shall be shown.

8. Arrangement, Layout, or Outline Drawings: Shows the physical space and mounting requirements of a piece of equipment. Diagrams may also indicate ventilation requirements and space provided for connections or the location to which connections are to be made.

1.02 GENERAL DESCRIPTION OF WORK

A. The Contractor shall provide all labor, material, tools, equipment and services required to complete the furnishing, installation, wiring, connection, calibration, adjustment, testing and operation of all electrical equipment, devices and components as indicated and implied by the plans and these Specifications. General descriptions include:

1. Complete the procurement, installation, wiring, connection, calibration, adjustment, testing and operation of all electrical devices, components, accessories and equipment that is not shown or specified but which is nonetheless required to make the systems shown and specified function properly.

2. Complete the wiring to, connection to, adjustment and calibration of, and testing of furnished electrical components.

3. Install all equipment so it shall be readily accessible for maintenance. Installations shall have electrical clearances in accordance with NEC and shall be installed in locations that will provide adequate cooling.

4. Check electrical equipment prior to installation so that defective equipment is not installed.

5. Provide field services of qualified technicians to supervise and check out the installation of the equipment, to supervise and check out interconnecting wiring, to conduct start-up of operation of the equipment, and to correct any problems that occur during start-up.

6. Provide circuit breakers, conduit, wire and installation for all items that require electrical power.

7. The Contractor shall provide all permits, licenses, approvals and other arrangements for work on this project and all fees shall be paid for by the Contractor. The Contractor shall include these fees in the bid price.

1.03 PROJECT DESCRIPTION

A. General

1. In general, the project shall consist of all electrical work required to make a complete and operating system. The electrical work includes, but is not limited to the following elements:

a. Selective demolition of lighting fixtures and associated raceways/wiring in the existing work area.

b. Provide new overhead lighting; complete with 1-hour tenting above to maintain ceiling system fire rating. Provide replacement lighting control switch and faceplate.

c. Provide receptacle outlets for toaster and coffee machine; utilize existing spare circuits in panelboard.

d. Bundle and secure existing undercounter low-voltage cabling.

e. Relocate existing heating system thermostat.

1.04 THERMAL (TEMPERATURE) RATINGS OF EQUIPMENT TERMINATIONS

A. All materials shall conform to the National Electrical Code Article 110-14C. Wiring and circuit breakers on this project are designed for 75 deg C operation above 100 amperes; 60 deg C for 100 amperes and below. All products furnished on this project shall have electrical terminations rated for 60 deg C for ampacities of 100 amperes and below, and rated for 75 deg C for ampacities above 100 amperes.

B. These requirements cover all electrical equipment provided under this Contract.

1.05 STANDARDS AND CODES

A. References: This section contains references to the following documents. They are part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

1. National Electrical Code (NEC)
2. Underwriters' Laboratories, Inc. (UL)
3. National Electrical Manufacturers Association (NEMA)
4. Canadian Standards Association (CSA)
5. Electrical Testing Laboratories (ETL)
6. Factory Mutual (FM)

B. Identification of Listed Products

1. All materials and equipment specified herein shall be within the scope of Nationally Recognized Testing Laboratory (NRTL) examination services, be approved by the NRTL for the purpose for which they are used, and shall bear the appropriate listing label.
2. Equipment listed/labeled by an NRTL shall be as dictated by the latest printing of the *Electrical Testing Laboratories Accreditation Report* available from the State of Washington Department of Labor and Industries, Electrical Inspection Division. Any NRTL listing/labeling shall be as accepted by the local authority having jurisdiction.
3. When a product is not available with a testing laboratory listing for the purpose for which it is to serve, the product may be required by the inspection authority to undergo a special inspection at the manufacturer’s place of assembly. All costs and expenses incurred for such inspections shall be included in the original contract price.

1.06 SITE FAMILIARIZATION

A. The Contractor shall become familiar with all features of the site which may affect the execution of the work prior to submitting a bid. The Contractor shall take all field measurements necessary for the work and shall assume full responsibility for their accuracy. The Contractor shall take full responsibility for locating and avoiding all substructures and utilities. Any damage to existing equipment or utilities shall be repaired or replaced by the Contractor at the Contractors expense.

1.07 AREA CLASSIFICATIONS

A. The following classification of areas shall be used as a reference in determining application of material covered by this Section unless specifically shown otherwise on the drawings. Areas that fall under two or more of the following classifications shall conform to the minimum requirements of all of the area classifications listed for that area.

1. General Purpose Areas:

    a. Raceways concealed in walls or ceilings for general purpose lighting and receptacle circuits may be EMT. Exposed boxes shall be NEMA 12. Concealed boxes may be NEMA 1.

1.08 ELECTRICAL SUBMITTALS

A. Electrical submittals shall be submitted, bound in a three-ring binder, labeled with the project name and Contractor's name, and Project Manager’s name. An index sheet shall be provided showing each product being submitted. Submittals shall be provided with section tabs per the electrical specifications by section and paragraph or equipment. Each equipment submittal sheet shall be labeled with the individual equipment name and number.

B. Submittals shall include:

1. Manufacturer’s name, address, and telephone number
2. Trade name, catalog model or number, nameplate data and size
3. Layout dimensions, capacity, project specification and paragraph reference
4. Local manufacturers representative (if applicable) name, address and telephone number

C. Submittals shall be largely complete prior to the first submittal. Long lead items may be submitted separately. Each item shall be clearly marked and provided with adequate sales and technical information to clearly show conformance with all aspects of the specification. Packages not provided as described above or largely incomplete shall be returned to the Contractor, without review or comment.

D. The Contractor shall ensure that the material being proposed conforms to the Contract requirements. In the event of any variance, the Contractor shall state specifically which portions vary and shall request a variance in writing.

E. The Contractor shall certify that all furnished equipment can be installed in the spaces allocated by stating on each item:

1. “This equipment can be installed in the spaces allocated.”

F. The Contractor shall provide shop drawings on 11” x 17” sheets (maximum), and shall be scaled using standard engineering or architectural scales. Wiring diagrams shall identify circuit terminals, and indicate the internal wiring for each item of equipment and the interconnection between each item of equipment.

G. Failure to submit a specified item does not relieve the Contractor from meeting the requirements of the Specification.

H. The Engineer will review the original submittal and one re-submittal on each item. Subsequent submittal reviews shall be conducted at the Contractor's expense. The Contractor shall be billed at the Engineer's current hourly rates for these subsequent submittal reviews.

1.09 PROJECT RECORD DRAWINGS

A. The contractor shall maintain one set of record drawings at the job showing any deviations in the electrical systems from the original design.

B. Markings shown on the drawings shall conform with the following color coding (marked with pencil):

1. Red - Additions, changes in routing, etc., showing placement different than shown on the original drawings
2. Green - Deletions, modifications in routings etc., deleting lines depicting placements different than shown on the original drawing
3. Black - Dimensional data showing exact placement of concealed or buried equipment, raceways, etc.

1.10 CORRECTION OF WORK

A. All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Engineer, who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced, and/or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Engineer shall be equitable.

1.11 WARRANTY

A. The Contractor shall warranty all work and all components thereof, excluding lamps, for a period of 1 year from date of Substantial Completion. The Contractor shall remedy any defects in workmanship and repair or replace any faulty equipment which shall appear within the warranty period without additional cost to the Owner.

PART 2 - PRODUCTS

2.01 EQUIPMENT AND MATERIALS

A. General

1. Equipment and materials shall be new and free from defects. All material and equipment of the same or a similar type shall be of the same manufacturer throughout the work. Standard production materials shall be used wherever possible.

B. Equipment Finish

1. Unless otherwise specified, electrical equipment and materials shall be painted by the manufacturer.

C. Galvanizing

1. Where specified, galvanizing shall be in hot dipped.

D. Support Systems

1. Support systems including panels shall be designed in accordance with the International Building Code (IBC) for seismic Zone 3 and to prevent deformation greater than 1/8 inch under the attached equipment load and an external load of 200 pounds in any direction.

2.02 NAMEPLATES

A. Nameplates shall be provided on all electrical devices. This includes, but is not limited to: motor control equipment, MCC cubicles, control stations, junction boxes, panels, motors, instruments, switches, indicating lights, meters, and all electrical equipment enclosures.

B. Nameplates shall also be provided on all electrical panel interior equipment. This includes but is not limited to: relays, circuit breakers, power supplies, terminals, contactors, and other devices.

C. Nameplates shall be made of 1/16" thick machine engraved laminated phenolic having engraved black filled letters not less than 3/16" high on white background or as shown on the drawings or other sections of the Specifications. Nameplates on the interior of panels shall be white polyester with printed thermal transfer lettering and permanent pressure sensitive acrylic; Tyton 822 or equal. All nameplates shall include the equipment name and number (and function, if applicable).

D. Warning nameplates shall be provided on all panels and equipment which contain multiple power sources or which may have energized circuits with the main disconnecting means in the off position. Lettering shall be white on red background.

E. All nameplates shall be secured to equipment with stainless steel screws/fasteners. Epoxy glue may be used where fasteners are not practical as determined by the Engineer.

2.03 OPERATION AND MAINTENANCE MANUALS

A. The Contractor shall prepare and assemble detailed operation and maintenance (O&M) manuals in accordance with the project general requirements and other requirements in other specification sections. The manuals shall be bound in a 3 ring binder and tabbed with an index. The O&M manual format shall follow the submittal data specified in Section 26 05 00. The manuals shall include, but not be limited to, the following:

1. Catalog data and complete parts list for all equipment and devices
2. All cut sheets of equipment and components
3. Preventative maintenance procedures
4. Trouble-shooting
5. Calibration
6. Testing
7. Replacement of components
8. Automatic mode operation
9. Manual mode operation
10. System schematics / shop drawings and record drawing.
11. As-built wiring diagrams of cabinet and enclosure contained assemblies
12. As-built wiring diagrams of overall system
13. Listing of recommended spare parts
14. Listing of recommended maintenance tools and equipment

PART 3 - EXECUTION

3.01 GENERAL

A. Storage and Installation Environment

1. The Contractor shall store all electrical equipment in a dry environment free from dust, moisture, sprays or vapors which may be detrimental to their new condition. After installation of equipment, the Contractor shall take care to protect all equipment from all dust, moisture, paint and other spray, harmful vapors.

2. Equipment shall not be installed in indoor areas until the area is covered, dry and finished to the point that other work will not create dust, vapors, or moisture. Equipment with integral heaters and fans shall not be installed until power is available at the location, and the heater and fan shall be energized within 6 hours of the equipment being installed.

B. Housekeeping

1. The premises shall be kept free of accumulated materials, rubbish and debris at all times. Surplus material, tools and equipment must not be stored at the job site. Upon completion of the project, all equipment and fixtures shall be cleaned and in proper condition for their intended use.

2. Lamps and fluorescent tubes shall be cleaned and defective units replaced at the time of final acceptance.

3.02 FINAL ACCEPTANCE

A. Prior to final acceptance, the Engineer will perform one or more site observation trips to develop a “punch list” of items deemed incomplete. The Electrical Contractor shall be present while these observations are taking place and shall be available for opening cabinets and operating and adjusting the system as is necessary for the Engineer to verify all equipment is installed and operates to the requirements of the contract documents.

B. The Contractor shall complete all items of work, including wire markers, nameplates, final tests and final test reports prior to requesting final acceptance inspections. All equipment shall be checked for proper operation and all signals verified for correct calibration and wiring. Fixtures shall have been cleaned, and burned out or defective lamps shall have been replaced.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Copper building wire rated 600 V or less.
2. Connectors, splices, and terminations rated 600 V and less.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Product Schedule: Indicate type, use, location, and termination locations.

1.03 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

PART 2 - PRODUCTS

2.01 COPPER BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.

B. Manufacturers for wire shall be Southwire, or approved equivalent.

C. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
2. RoHS compliant.
3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

D. Conductors: Copper, complying with ASTM B 3 for bare annealed copper and with ASTM B 8 for stranded conductors.

E. Conductor Insulation:

1. Type THHN and Type THWN-2: Comply with UL 83.
2. Type USE-2 and Type SE: Comply with UL 854.

2.02 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

B. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.

1. Material: Copper.
2. Type: One hole with standard barrels.
3. Termination: Compression.

PART 3 - EXECUTION

3.01 CONDUCTOR MATERIAL APPLICATIONS

A. Branch Circuits: Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger.

3.02 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Exposed Branch Circuits, Including in Crawlspaces: Type THHN/THWN-2, single conductors in raceway.

B. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway.

3.03 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 26 05 33 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

3.04 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material.

1. Use oxide inhibitor in each splice, termination, and tap for aluminum conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.05 IDENTIFICATION

A. Identify and color-code conductors and cables according to Section 26 05 53 "Identification for Electrical Systems."

B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes grounding and bonding systems and equipment.

B. Section includes grounding and bonding systems and equipment, plus the following special applications:

1. Underground distribution grounding.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.03 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans showing dimensioned as-built locations of grounding features specified in "Field Quality Control" Article.

B. Qualification Data: For testing agency and testing agency's field supervisor.

1.04 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1. Plans showing as-built, dimensioned locations of grounding features specified in "Field Quality Control" Article, including the following:

a. Test wells.

b. Ground rods.

c. Grounding arrangements and connections for separately derived systems.

2. Instructions for periodic testing and inspection of grounding features at test wells and ground rings based on NETA MTS and NFPA 70B.

a. Tests shall determine if ground-resistance or impedance values remain within specified maximums, and instructions shall recommend corrective action if values do not.

b. Include recommended testing intervals.

1.05 QUALITY ASSURANCE

A. Testing Agency Qualifications: Certified by NETA.

PART 2 - PRODUCTS

2.01 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.02 MANUFACTURERS:

A. Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Burndy; Part of Hubbell Electrical Systems.

2. Galvan Industries, Inc.; Electrical Products Division, LLC.

3. Harger Lightning & Grounding.
4. ILSCO.
5. O-Z/Gedney; a brand of Emerson Industrial Automation.

2.03 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

C. Grounding Bus: Predrilled rectangular bars of annealed copper, 1/4 by 4 inches (6.3 by 100 mm) in cross section, with 9/32-inch (7.14-mm) holes spaced 1-1/8 inches (28 mm) apart. Stand-off insulators for mounting shall comply with UL 891 for use in switchboards, 600 V and shall be Lexan or PVC, impulse tested at 5000 V.

2.04 CONNECTORS

A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

B. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

C. Bus-Bar Connectors: Mechanical type, cast silicon bronze, solderless compression type wire terminals, and long-barrel, two-bolt connection to ground bus bar.

D. Bus-Bar Connectors: Compression type, copper or copper alloy, with two wire terminals.

E. Beam Clamps: Mechanical type, terminal, ground wire access from four directions, with dual, tin-plated or silicon bronze bolts.

F. Cable-to-Cable Connectors: Compression type, copper or copper alloy.

G. Cable Tray Ground Clamp: Mechanical type, zinc-plated malleable iron.

H. Conduit Hubs: Mechanical type, terminal with threaded hub.

I. Ground Rod Clamps: Mechanical type, copper or copper alloy, terminal with hex head bolt.

J. Lay-in Lug Connector: Mechanical type, copper rated for direct burial terminal with set screw.

K. Service Post Connectors: Mechanical type, bronze alloy terminal, in short- and long-stud lengths, capable of single and double conductor connections.

L. Signal Reference Grid Clamp: Mechanical type, stamped-steel terminal with hex head screw.

M. Straps: Solid copper, Rated for 600 A.

N. Tower Ground Clamps: Mechanical type, copper or copper alloy, terminal one-piece clamp.

O. U-Bolt Clamps: Mechanical type, copper or copper alloy, terminal listed for direct burial.

P. Water Pipe Clamps:

1. Mechanical type, two pieces with zinc-plated bolts.
    a. Material: Tin-plated aluminum.
    b. Listed for direct burial.
2. U-bolt type with malleable-iron clamp and copper ground connector.

2.05 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad steel; 3/4 inch by 10 feet (19 mm by 3 m), sectional type.

PART 3 - EXECUTION

3.01 APPLICATIONS

A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

B. Underground Grounding Conductors: Install bare tinned-copper conductor, No. 2/0 AWG minimum.

1. Bury at least 24 inches (600 mm) below grade.

C. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
3. Connections to Ground Rods at Test Wells: Bolted connectors.
4. Connections to Structural Steel: Welded connectors.

3.02 GROUNDING AT THE SERVICE

A. Equipment grounding conductors and grounding electrode conductors shall be connected to the ground bus. Install a main bonding jumper between the neutral and ground buses.

3.03 GROUNDING SEPARATELY DERIVED SYSTEMS

A. Generator: Install grounding electrode(s) at the generator location. The electrode shall be connected to the equipment grounding conductor and to the frame of the generator.

3.04 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

A. Comply with IEEE C2 grounding requirements.

3.05 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

3.06 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade unless otherwise indicated.

1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.

C. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.

3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

D. Grounding and Bonding for Piping:

1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe flange by using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.

2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.

3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.

3.07 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.

2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.

3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, at ground test wells, and at individual ground rods. Make tests at ground rods before any conductors are connected.

a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or

seepage and without chemical treatment or other artificial means of reducing natural ground resistance.

b. Perform tests by fall-of-potential method according to IEEE 81.

4. Prepare dimensioned Drawings locating each test well, ground rod and ground-rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location, and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.

B. Grounding system will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

D. Report measured ground resistances that exceed the following values:

1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 ohms.

2. Power Distribution Units or Panelboards Serving Electronic Equipment: 1 ohm(s).

E. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Metal conduits and fittings.
2. Non-metallic underground raceway and fittings
3. Boxes, enclosures, and cabinets.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

PART 2 - PRODUCTS

2.01 METAL CONDUITS AND FITTINGS

A. Metal Conduit:

1. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. GRC: Comply with ANSI C80.1 and UL 6.
3. EMT: Comply with ANSI C80.3 and UL 797.
4. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

B. Metal Fittings: Comply with NEMA FB 1 and UL 514B.

1. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Fittings, General: Listed and labeled for type of conduit, location, and use.
3. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 1203 and NFPA 70.
4. Fittings for EMT:
    a. Material: Steel.
    b. Type: Compression.
5. Expansion Fittings: PVC or steel to match conduit type, complying with UL 651, rated for environmental conditions where installed, and including flexible external bonding jumper.

2.02 BOXES, ENCLOSURES, AND CABINETS

A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

B. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

C. Nonmetallic Outlet and Device Boxes: Comply with NEMA OS 2 and UL 514C.

D. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

E. Box extensions used to accommodate new building finishes shall be of same material as recessed box.

F. Device Box Dimensions: 4 inches square by 2-1/8 inches deep (100 mm square by 60 mm deep).

PART 3 - EXECUTION

3.01 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed Conduit: GRC.
2. Concealed Conduit, Aboveground: GRC.
3. Underground Conduit: Type EPC-40-PVC.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
5. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.

B. Indoors: Apply raceway products as specified below unless otherwise indicated.

1. Exposed, Not Subject to Physical Damage: EMT.
2. Exposed, Not Subject to Severe Physical Damage: EMT.
3. Concealed in Ceilings and Interior Walls and Partitions: EMT.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
5. Damp or Wet Locations: GRC.
6. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 stainless steel in damp or wet locations.

C. Minimum Raceway Size: 3/4-inch (21-mm) trade size above grade, 1” minimum trade size below grade.

D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
2. EMT: Use rain-tight compression fittings.
3. EPC-40-PVC same material as raceway, slip-on couplings with manufacturer approved cement compound and primer as required. Threaded adapter terminations for transition to GRS elbows and risers.

3.02 INSTALLATION

A. Securely fasten raceways and boxes with approved fasteners as required by Code.

B. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter.

C. Do not fasten conduits onto the bottom side of a metal deck roof.

D. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

E. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.

F. Make bends in raceway using large-radius preformed ells. Field bending shall be according to NFPA 70 minimum radii requirements. Use only equipment specifically designed for material and size involved.

G. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

H. Support conduit within 12 inches (300 mm) of enclosures to which attached.

I. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

J. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.

K. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.

L. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch (35-mm) trade size and insulated throat metal bushings on 1-1/2-inch (41-mm) trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

M. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

N. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 36 inches (915 mm) of flexible conduit for recessed luminaires, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

   1. Use LFMC in damp or wet locations subject to severe physical damage.

   2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

O. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements.

P. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between the box and cover plate or the supported equipment and box.

Q. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

R. Locate boxes so that cover or plate will not span different building finishes.

S. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

T. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.03 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section Includes:

1. Color and legend requirements for raceways, conductors, and warning labels and signs.
2. Labels.
3. Bands and tubes.
4. Tapes and stencils.
5. Tags.
6. Signs.
7. Cable ties.
8. Paint for identification.
9. Fasteners for labels and signs.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Comply with ASME A13.1.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Comply with NFPA 70E requirements for arc-flash warning labels.

F. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

G. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.02 COLOR AND LEGEND REQUIREMENTS

A. Raceways and Cables Carrying Circuits at 600 V or Less:

1. Black letters on an orange field.
2. Legend: Indicate voltage.

B. Color-Coding for Phase-and Voltage-Level Identification, 600 V or Less: Use colors listed below for ungrounded branch-circuit conductors.

1. Color shall be factory applied.
2. Colors for 208/120-V Circuits:
    a. Phase A: Black.
    b. Phase B: Red.
    c. Phase C: Blue.
3. Color for Neutral: White.
4. Color for Equipment Grounds: green.
5. Colors for Isolated Grounds: Green with white stripe.

C. Warning Label Colors:
1. Identify system voltage with black letters on an orange background.

D. Equipment Identification Labels:
1. Black letters on a white field.

2.03 LABELS

A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.

B. Self-Adhesive Labels: Polyester, thermal, transfer-printed, 3-mil- (0.08-mm-) thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.
1. Minimum Nominal Size:
    a. 1-1/2 by 6 inches (37 by 150 mm)for raceway and conductors.
    b. 3-1/2 by 5 inches (76 by 127 mm)for equipment.
    c. As required by authorities having jurisdiction.

2.04 BANDS AND TUBES

A. Snap-around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeves, 2 inches (50 mm) long, with diameters sized to suit diameter and that stay in place by gripping action.

B. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tubes with machine-printed identification labels, sized to suit diameters of and shrunk to fit firmly around item being identified. Full shrink recovery occurs at a maximum of 200 deg F (93 deg C). Comply with UL 224.

2.05 SIGNS

A. Laminated Acrylic or Melamine Plastic Signs:
1. Engraved legend.
2. Thickness:
    a. For signs up to 20 sq. in. (129 sq. cm), minimum 1/16 inch (1.6 mm) thick.
    b. For signs larger than 20 sq. in. (129 sq. cm), 1/8 inch (3.2 mm) thick.

c. Engraved legend with black letters on white face.

d. Self-adhesive.

e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.06 CABLE TIES

A. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).

2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 12,000 psi (82.7 MPa).

3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).

4. Color: Black, except where used for color-coding.

B. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).

2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 12,000 psi (82.7 MPa).

3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).

4. Color: Black.

2.07 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Retain paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.

B. Install identifying devices before installing acoustical ceilings and similar concealment.

C. Verify identity of each item before installing identification products.

D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.

E. Apply identification devices to surfaces that require finish after completing finish work.

F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.

G. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

H. System Identification for Raceways and Cables under 600 V: Identification shall completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.

1. Secure tight to surface of conductor, cable, or raceway.

I. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

J. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.

K. Vinyl Wraparound Labels:

1. Secure tight to surface at a location with high visibility and accessibility.

2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.

L. Self-Adhesive Wraparound Labels: Secure tight to surface of raceway or cable at a location with high visibility and accessibility.

M. Self-Adhesive Labels:

1. On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.

2. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high label; where two lines of text are required, use labels 2 inches (50 mm) high.

N. Heat-Shrink, Preprinted Tubes: Secure tight to surface at a location with high visibility and accessibility.

O. Marker Tapes: Secure tight to surface at a location with high visibility and accessibility.

P. Laminated Phenolic Plastic Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.

2. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on minimum 1-1/2-inch- (38-mm-) high sign; where two lines of text are required, use signs minimum 2 inches (50 mm) high.

Q. Cable Ties: General purpose, for attaching tags, except as listed below:

1. Outdoors: UV-stabilized nylon.

3.02 IDENTIFICATION SCHEDULE

A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.

B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.

C. Accessible Fittings for Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive labels containing the wiring system legend and system voltage. System legends shall be as follows:

   1. "POWER - 120/240VAC"

D. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use self-adhesive wraparound labels to identify the phase.

   1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.

E. Equipment Identification Labels:

   1. Indoor Equipment: Self-adhesive label.

   2. Outdoor Equipment: Laminated phenolic plastic, engraved.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. GFCI receptacles, 125 V, 20 A.
2. Toggle switches, 120/277 V, 20 A.
3. Wall plates.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.01 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

B. Comply with NFPA 70.

C. RoHS compliant.

D. Comply with NEMA WD 1.

E. Device Color:

1. Wiring Devices Connected to Normal Power System: White unless otherwise indicated or required by NFPA 70 or device listing.

F. Wall Plate Color: For plastic covers, match device color.

G. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

2.02 GFCI RECEPTACLES, 125 V, 20 A

A. Duplex GFCI Receptacles, 125 V, 20 A:

1. Shall be Cooper; VGF20, Legrand 2095LA Series, Or Approved Equal.
2. Description: Integral GFCI with "Test" and "Reset" buttons and LED indicator light. Two pole, three wire, and self-grounding.
3. Configuration: NEMA WD 6, Configuration 5-20R.
4. Type: Feed through.
5. Standards: Comply with UL 498, UL 943 Class A, and FS W-C-596.

2.03 TOGGLE SWITCHES, 120/277 V, 20 A

A. Single-Pole Switches, 120/277 V, 20 A:

1. Shall be Cooper; AH1221, Legrand PS20AC1, Or Approved Equal.
2. Standards: Comply with UL 20 and FS W-S-896.

2.04 WALL PLATES

A. Single Source: Obtain wall plates from same manufacturer of wiring devices.

B. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: Steel with white baked enamel, suitable for field painting.
3. Material for Unfinished Spaces: Smooth, high-impact thermoplastic.
4. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in wet and damp locations.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Coordination with Other Trades:

1. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
2. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
3. Install wiring devices after all wall preparation, including painting, is complete.

C. Device Installation:

1. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
2. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

D. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.

E. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

F. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

G. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

3.02 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Test Instruments: Use instruments that comply with UL 1436.
2. Test Instrument for Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

B. Tests for Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.
2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Using the test plug, verify that the device and its outlet box are securely mounted.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes the following types of LED luminaires:

1. Recessed, Troffer.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Manufacturers' Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.

B. Shop Drawings: For nonstandard or custom luminaires.

1. Include plans, elevations, sections, and mounting and attachment details.

2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

3. Include diagrams for power, signal, and control wiring.

C. Samples: For each luminaire and for each color and texture with standard factory-applied finish.

1.03 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.04 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.

B. Provide luminaires from a single manufacturer for each luminaire type.

C. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.

1.05 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

B. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Luminaires shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

B. Seismic Performance: Luminaires and lamps shall be labeled vibration and shock resistant.

1. The term "withstand" means "the luminaire will remain in place without separation of any parts when subjected to the seismic forces specified and the luminaire will be fully operational during and after the seismic event."

C. Ambient Temperature: 41 to 104 deg F.

1. Relative Humidity: Zero to 95 percent.

D. Altitude: Sea level to 1000 feet.

2.02 LUMINAIRE REQUIREMENTS

A. Refer to fixture schedule on drawings for summary of fixture material requirements.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp characteristics:

a. "USE ONLY" and include specific lamp type.

b. Lamp diameter, shape, size, wattage, and coating.

c. CCT and CRI.

D. Recessed luminaires shall comply with NEMA LE 4.

E. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.

2.03 RECESSED, TROFFER LUMINAIRE A.

A. Manufacturers for Luminaire shall be Lithonia, H.E. Williams AT1-14 Series, Or Approved Equal.

B. Nominal Operating Voltage: 120 V ac.

C. Lamp:

1. LED and Driver

2. Minimum 5,000 lm.

3. Minimum allowable efficacy of 80 lm/W.

4. CRI of minimum 80, CCT of 4000 K.

5. Rated lamp life of 60,000 hours to L70.

D. Housings:

1. 12” x 48” nominal dimension

2. Extruded-aluminum or Cold-rolled steel housing.

3. Painted finish.

4. With integral mounting provisions.

5. Provide accessory flange mounting kit for GWB ceilings

E. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Components are designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.

F. Diffusers and Globes:

1. Perforated metal drop center.

G. Standards:

1. ENERGY STAR certified.
2. RoHS compliant.
3. UL Listing: Listed for damp location.
4. NEMA LE 4.

2.04 MATERIALS

A. Metal Parts:

1. Free of burrs and sharp corners and edges.
2. Sheet metal components shall be steel unless otherwise indicated.
3. Form and support to prevent warping and sagging.

B. Steel:

1. ASTM A 36/A 36M for carbon structural steel.
2. ASTM A 568/A 568M for sheet steel.

C. Stainless Steel:

1. 1. Manufacturer's standard grade.
2. 2. Manufacturer's standard type, ASTM A 240/240 M.

D. Galvanized Steel: ASTM A 653/A 653M.

E. Aluminum: ASTM B 209.

2.05 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.06 LUMINAIRE SUPPORT

A. Secure fixtures to structural surfaces.

B. #10AWG galvanized steel wire supports, four corners, with seismic clips for recessed troffers.

C. Single-Stem Hangers: 1/2-inch steel tubing with swivel ball fittings and ceiling canopy. Finish same as luminaire.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Comply with NECA 1.

B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.

C. Install lamps in each luminaire.

D. Supports:

1. Sized and rated for luminaire weight.
2. Able to maintain luminaire position after cleaning and relamping.
3. Provide support for luminaire without causing deflection of ceiling or wall.
4. Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.

3.02 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.

B. Luminaire will be considered defective if it does not pass operation tests and inspections.

C. Prepare test and inspection reports.

END OF SECTION

Hazardous Building Materials Assessment

Port of Tacoma
Port of Tacoma Road
NIM Tower
Tacoma, WA 98421

Prepared for: Port of Tacoma
One Sitcum Plaza
PO Box 1837
Tacoma, WA 98421

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

On-call Environmental Support Services
Professional Services Agreement # 070479
Task Order No. 06

EXECUTIVE SUMMARY

The Port of Tacoma retained DH Environmental, Inc. (DH Environmental) to conduct a hazardous building materials assessment of its NIM Tower located on Port of Tacoma Road in Tacoma, Washington. DH Environmental provided two AHERA accredited building inspectors to conduct the assessment on May 16th, 2018. The scope of the services included assessing the buildings for hazardous building materials in anticipation of remodeling the 4th floor of the NIM Tower.

DH Environmental assessed the interior of the 4th floor for the following hazardous building materials:

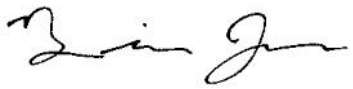
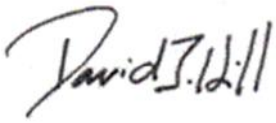
- Asbestos-containing materials (ACM);
- Lead-based paints (LBP)
- Other hazardous building materials (universal waste, refrigerant gases, radioactive exit signs and smoke detectors)

Seven bulk samples of suspect asbestos-containing materials were collected and analyzed using polarized light microscopy (PLM). None of the materials sampled and analyzed were found to contain asbestos.

One suspected paint chip sample was collected and analyzed for total lead content by EPA Method 3051/7000B. The paint chip sample did not contain lead above the laboratory method detection limit.

Other hazardous materials identified included eight fluorescent lamps that should be managed as universal waste if they cannot be reused and one smoke detector.

PROJECT INFORMATION

Project Title	Port of Tacoma Road – NIM Tower 4th Floor Remodel Hazardous Building Materials Assessment
Assessment Conducted by	DH Environmental, Inc. 1011 SW Klickitat Way, Suite 107 Seattle, WA 98134
Project Owner	Port of Tacoma
Contract Vehicle	Port of Tacoma On-call Environmental Support Services Professional Services Agreement # 070479 Task Order No. 06
Owner's Representative	Stanley Sasser Environmental Analyst
Assessment Personnel	Brian Johnson, OHST *AHERA Accredited Building Inspector* *AHERA Accredited Project Designer* *Certified Lead Risk Assessor* Sellers Weatherall *AHERA Accredited Building Inspector* *AHERA Accredited Project Designer*
Survey Date(s)	16 May 2018
Report Delivery Date	29 May 2018
Report Prepared by	 Brian Johnson, OHST EHS Program Manager *AHERA Accredited Building Inspector* *AHERA Accredited Project Designer* *Certified Lead Risk Assessor*
Report Reviewed by	 David Hill, PE, CHMM, CPEA Principal AHERA Accredited Project Designer DH Environmental, Inc. 

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1.0 INTRODUCTION

The Port of Tacoma retained DH Environmental, Inc. (DH Environmental) to conduct a hazardous building materials assessment of its property known as "NIM Tower" located at Port of Tacoma Road in Tacoma, Washington. DH Environmental provided two AHERA accredited building inspectors to conduct the assessment on May 16th, 2018. Prior to mobilization and sampling, a site walk was conducted with the owner's Project Engineer to determine the scope of the remodel project and identify suspect building materials that will be disturbed during the remodel.

1.1 Scope of Services

The scope of the services included assessing parts of the building for hazardous building materials in anticipation of 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 building for the following hazardous building materials:

- Asbestos-containing materials (ACM);
- Lead-based paints (LBP)
- Polychlorinated Biphenyls (PCBs)
- Other hazardous building materials:
    - universal waste
    - refrigerant gases (CFCs)
    - radioactive exit signs and smoke detectors.

1.2 Assessment Objective

The objective of this hazardous building materials assessment is to assist the Port of Tacoma with communicating the presence of hazardous building materials and the presence, 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

NIM Tower is a five-story structure. The Port of Tacoma did not know the exact year of construction, but they believed the building was built during the timeframe of the late 1970's to the mid 1980's.

The interior of the NIM Tower consists of one main office area. Building materials on the interior include dry wall and paint, carpeted floors, and base coving.

Figure 1 is a site map/vicinity map showing the building location both locally and regionally. Figures 2 shows the interior of the building.

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 Ill 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., as well as related AHERA Protocols. A site walk was conducted with the Owner's Project Engineer prior to conducting the assessment.

The assessment team investigated the interior areas identified for remodel by the Port Project Engineer. Destructive sampling was needed in some areas to help identify building material components (e.g. drywall). Where appropriate, suspect ACM was grouped as homogenous if the materials were similar in appearance. Because the building was still being actively used, it is possible that other hazardous building materials may be found throughout the building in the walls, voids and other concealed areas. The locations of the sample collections are shown in Figure 2.

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 4).

3.3 Sampling Results

Seven bulk samples of suspect asbestos-containing materials were collected and analyzed using Polarized Light Microscopy (PLM). None of the materials sampled were found to contain asbestos greater than the 1% reporting limit by PLM.

Sample ID	Material Description	Sample Location	Concentration	Material Quantity Estimate (if applicable)
POT-NIM-Remodel-ACM-01	Layer 1: Black Rubbery Material Layer 2: Off-White Mastic	NIM Tower 4th Floor	ACM (%): ND	NA
POT-NIM-Remodel-ACM-02	Layer 1: Black Rubbery Material Layer 2: Off-White Mastic Layer 3: White Compacted Powdery Material with Paint Layer 4: White Chalky Material with Paper	NIM Tower 4th Floor	ACM (%): ND	NA
POT-NIM-Remodel-ACM-03	Layer 1: Black Rubbery Material Layer 2: Off-White Mastic Layer 3: White Compacted Powdery Material with Paper and Paint	NIM Tower 4th Floor	ACM (%): ND	NA
POT-NIM-Remodel-ACM-04	Layer 1: Multi-colored Fibrous Material Layer 2: Beige Material Layer 3: Yellow Mastic Layer 4: White Compacted Powdery Material with Paint	NIM Tower 4th Floor	ACM (%): ND	NA
POT-NIM-Remodel-ACM-05	Layer 1: Multi-colored Fibrous Material Layer 2: Beige Material Layer 3: Yellow Mastic	NIM Tower 4th Floor	ACM (%): ND	NA
POT-NIM-Remodel-ACM-06	Layer 1: Multi-colored Fibrous Material Layer 2: Beige Material Layer 3: Yellow Mastic Layer 4: White Bumpy Compacted Powdery Material with Paint Layer 5: White Chalky Material with Paint	NIM Tower 4th Floor	ACM (%): ND	NA
POT-NIM-Remodel-ACM-07	Layer 1: White Bumpy Compacted Powdery Material with Paint Layer 2: White Chalky Material with Paper	NIM Tower 4th Floor	ACM (%): ND	NA

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/m^3) of air. Workers must not be exposed to lead at concentrations greater than the permissible exposure limit (PEL) of 50 ug/m^3 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 regulates LBP activities in residential target housing (40 CFR 745, Subpart L). These regulations include both training and certification requirements for persons involved in LBP activities in target housing, as well as work practice standards for conducting LBP inspections, risk assessments, and abatement activities. The regulations under 40 CFR 745, Subpart L do not apply to LBP activities to be conducted on the subject property.

The USEPA and Washington State requires 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 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 paint chip sampling in accordance with the methodologies set forth by the U.S. Department of Housing and Urban Development (HUD).

Paint chip samples were taken from a 4-square inch or larger area that is representative of the paint on the testing combination. Samples were collected using standard industry practices to prevent sample contamination. Samples were collected, containerized, and delivered to NVL Environmental Laboratories within the required hold times following standard chain of custody procedures. Suspect LBP samples were analyzed per EPA Method 3051/700B. NVL is a National Lead Laboratory Accreditation Program (NLLAP) – certified laboratory, certification number 101861 (see attachment 4). The locations of the sample collections are shown in Figure 2.

4.3 LBP Sampling Results

The assessment team collected one suspected paint chip sample for total lead content analysis by EPA Method 3051/7000B. The paint chip sample collected did not contain lead above the laboratory method detection limit.

Sample ID	Space Name	Component	Substrate	Color	Condition	Concentration	Notes
POT-NIM-Remodel-Pb-01	Interior	Wall	Dry Wall	White	Intact	Total Lead: <0.00800 mg/cm²	

Table 2: LBP Sample Results
mg/cm²: milligrams per centimeter squared (%)
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 Material*[1]. 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."

5.2 PCB Sampling Methodology

DH Environmental completed a visual survey of the interior areas of concern and no suspect areas were found that would contain PCBs.

[1] http://www.epa.gov/pcbsincaulk/caulkremoval.htm

6.0 OTHER HAZARDOUS BUILDING MATERIALS ASSESSMENT

A visual inspection was conducted to inventory other hazardous building materials. Other hazardous building materials assessed included universal waste, refrigerant gases, radioactive exit signs and smoke detectors, and fire extinguishers.

6.1 Universal Waste

Universal waste is a category of dangerous waste that allows all businesses to handle several common types of dangerous waste under simplified rules. Managing these materials as universal waste means that they are not counted toward your generator status or reported on your Dangerous Waste Annual Report. In Washington State, five categories of waste can be managed as universal waste:

- Batteries;
- Lights, lamps, light bulbs, and light tubes;
- Mercury-containing thermometers;
- Mercury-containing thermostats;
- Mercury-containing switches and relays.

If any of these materials are identified for disposal for the demolition or renovation project, the materials should be removed, packaged, and recycled as universal waste.

6.2 Refrigerant Gases

Section 608 of the Federal Clean Air Act prohibits individuals from intentionally venting refrigerants into the atmosphere while disposing of refrigeration/AC equipment. “De minimis” quantities of refrigerant released in the course of making good faith attempts to recapture and recycle or safely dispose of refrigerant are not subject to this prohibition (40 CFR 82.154[a][2]). To implement the venting prohibition, Section 608 specifies evacuation level requirements (40 CFR 82.156) and refrigerant recovery equipment requirements (40 CFR 82.158) for both small appliances and other refrigeration/AC equipment. When demolishing or renovating a structure, the following equipment should be assessed to determine the need for evacuation, recovery, or disposal by a licensed technician:

Small Appliances

A small appliance is defined as any appliance that is fully manufactured, charged, and hermetically sealed in a factory with five pounds or less of a CFC or HCFC refrigerant, including the following:

- Refrigerators and freezers (designed for home, commercial, or consumer use);
- Medical or industrial research refrigeration equipment;
- Room air conditioners (including window air conditioners and packaged terminal air heat pumps);
- Under-the-counter ice makers;
- Vending machines; and
- Drinking water coolers.

All Other Equipment

All other equipment refers to all appliances except for small appliances, motor vehicle air conditioners (MVACs), and MVAC-like appliances. Specifically, this equipment includes:

- Chillers;
- Industrial refrigeration equipment (not including research equipment);
- Refrigerant fire suppression systems;
- Commercial refrigeration equipment; and
- Cold storage equipment.

6.3 Fire Extinguishers

Dry chemical and liquid fire extinguishers may designate as dangerous waste if they are disposed of as solid waste. Fire extinguishers should be removed from service prior to demolishing or renovating the area where the fire extinguishers are mounted or stored. If the fire extinguishers cannot be recycled or reused, they must be designated and disposed of accordingly.

6.4 Radioactive Exit Signs and Smoke Alarms

Many exit signs and smoke alarms contain low-level radioactive sources that should be managed in accordance with Nuclear Regulatory Commission Regulations. Accredited mail-in programs are available to recycle these materials. Radioactive exit signs and smoke alarms should be identified for removal and recycling or disposal prior to renovation or demolition of the building or affected area.

6.5 Summary of Other Hazardous Building Materials

This hazardous building materials assessment identified fluorescent light tubes/ballasts, a smoke detector, and HVAC systems that should be removed, reused, recycled, or disposed of prior to the renovation project if disturbance of these items is part of the scope of work. Eight fluorescent lamps were identified.

NIM Tower 4th Floor - Other Hazardous Building Materials	Total
Florescent Light Tubes	8
Florescent Light Ballast (PCB Status Not Discerned)	4
High Intensity Discharge Lamps	0
Fire Extinguishers	0
Smoke Detectors	1
HVAC Systems	2
Mercury-Containing Thermostats	0

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Asbestos Containing Materials

ACM was not detected in the areas identified by the Port Project Engineer for renovation Therefore, we recommend that this work should not be considered an "Asbestos Project" as defined in the Puget Sound Clean Air Agency Regulation 3, or WAC 296-62-07701.

7.2 Lead Based Paint

Lead was not detected in the building materials sampled. Therefore, we do not believe engineering and work practices are needed to prevent employee and/or workers' exposure to lead during renovation.

7.3 Polychlorinated Biphenyls

None of the materials that were scheduled to be disturbed during the renovation appeared to contain PCBs therefore; no samples were collected during the assessment.

Light ballasts were not able to be visually examined during the assessment, due to access available in the room (existing furniture and occupants). In the event that the lighting is replaced the Port should make a waste designation for the ballasts prior to disposal. This is determined by whether or no the words "No PCBs" appear on the ballasts. Alternatively, if the manufacture date of the ballasts is after July 2, 1979, the ballasts can be considered non-PCB.

7.4 Other Hazardous Building Materials

The eight fluorescent lamps should be removed from service at this location prior to the renovation of the NIM Tower 4th Floor and either reused or managed as universal waste.

8.0 LIMITATIONS

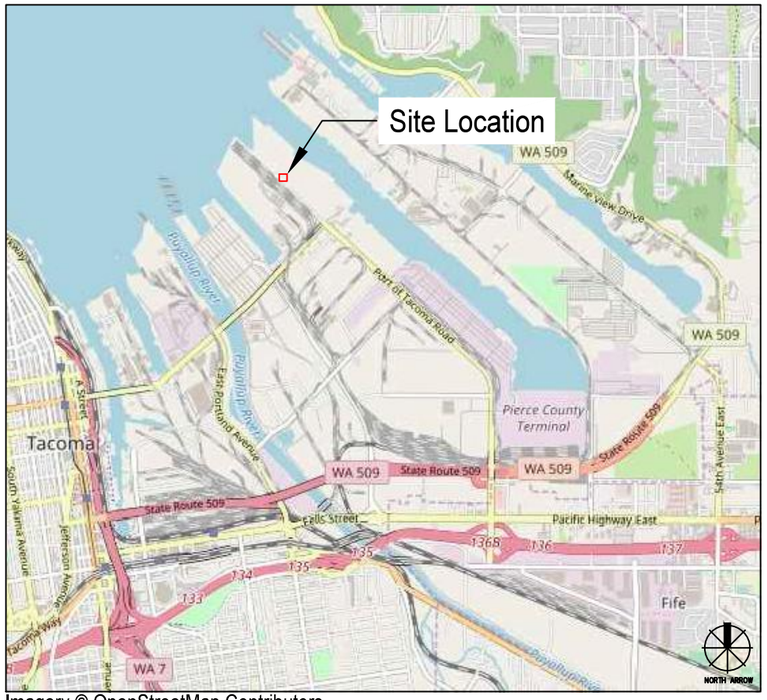
This report presents the results of the hazardous building materials assessment conducted at the Port of Tacoma "NIM Tower 4th Floor" located on Port of Tacoma Road, Tacoma, WA. The assessment was conducted with the objective of identifying hazardous building materials in anticipation of renovation in 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, lead in paint, polychlorinated biphenyls universal waste, and other hazardous building materials discussed in Section 6 of this document. 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 of 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 Site Map/Vicinity Map

Imagery © OpenStreetMap Contributors

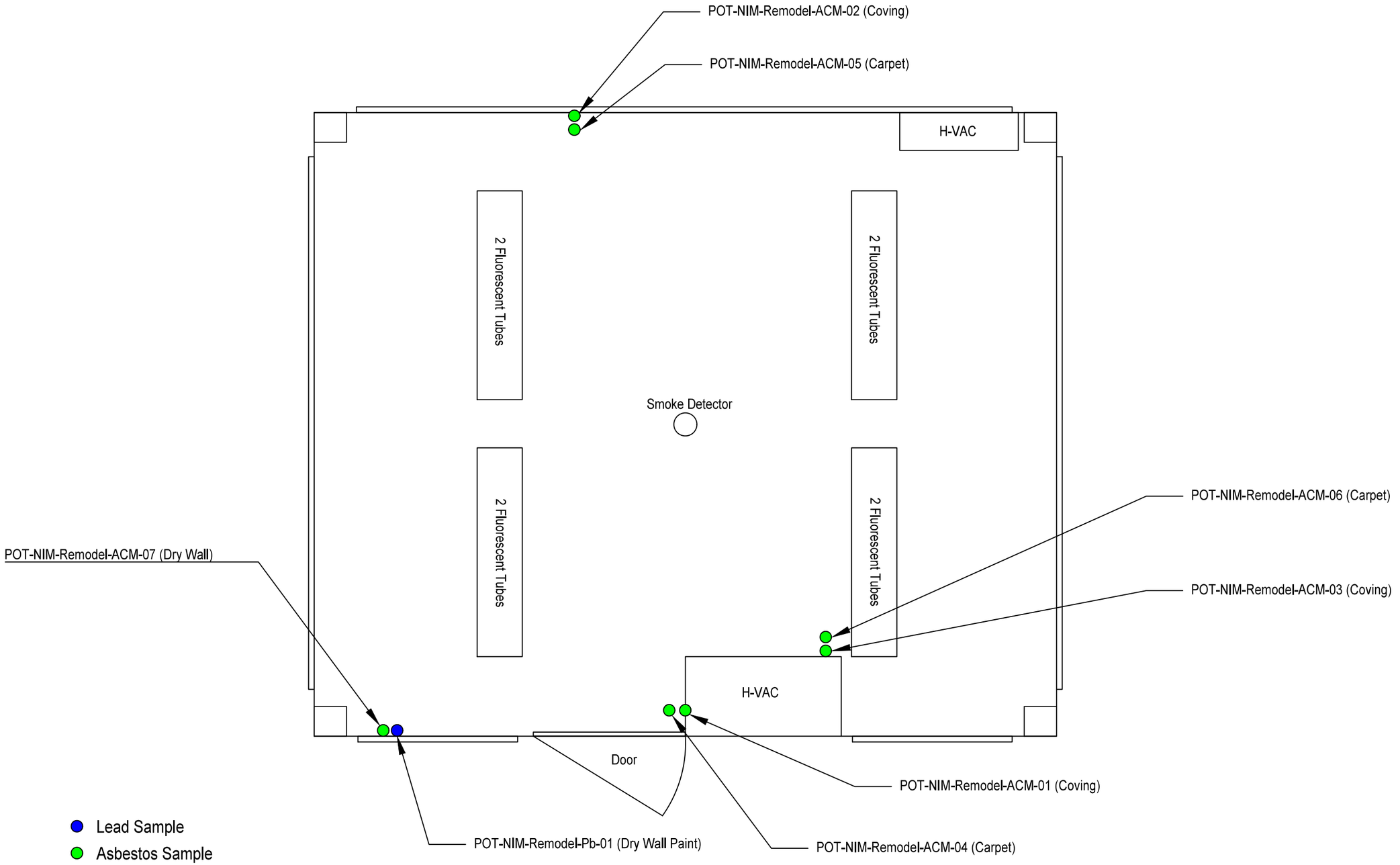


Imagery © OpenStreetMap Contributors

Imagery © 2015 ESRI, Digial Globe, US Geological Survey, USDA Farm Service Agency

Date: 05/16/2018 By: Sellers Weatherall Accredited AHERA Inspector and AHERA Project Designer Address: Port of Tacoma NIM Tower 4th Floor Project Number: NA	DH Environmental Inc	Hazardous Building Materials Inspection Port of Tacoma NIM Tower 4th Floor Remodel	Location Map	Figure 1

Figure 2 Sampling Locations – Interior



Date: 05/16/2018

By: Sellers Weatherall
Accredited AHERA Inspector
and AHERA Project Designer

DH Environmental Inc

Address: Port of Tacoma NIM Tower 4th Floor Project Number: NA

Hazardous Building Materials Inspection

Port of Tacoma

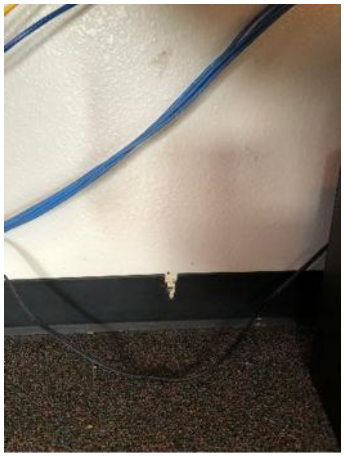
NIM Tower 4th Floor Remodel

Sampling Locations

Figure 2

Attachment 1 Site Photos

Sample ID: POT-NIM-Remodel-ACM-01



Sample ID: POT-NIM-Remodel-ACM-02

Sample ID: POT-NIM-Remodel-ACM-03

Sample ID: POT-NIM-Remodel-ACM-04

Sample ID: POT-NIM-Remodel-ACM-05

Sample ID: POT-NIM-Remodel-ACM-06

Sample ID: POT-NIM-Remodel-ACM-07

Sample ID: POT-NIM-Remodel-Pb-01

Attachment 2 Laboratory Analytical Reports

May 25, 2018

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

NVL LABS
INDUSTRIAL HYGIENE SERVICES
Laboratory | Management | Training

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1809328.01

Client Project: N-A
Location: Port Of Tacoma

Dear Mr. Johnson.,

Enclosed please find test results for the 7 sample(s) submitted to our laboratory for analysis on 5/16/2018.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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,

Matt Macfarlane, Asbestos Lab Supervisor

Enc.: Sample Results

NVLAP
Lab Code: 102063-0

1.888.NVL.LABS
1.888.(685.5227)
www.nvllabs.com

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p 206.547.0100 | f 206.634.1936

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

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: Port Of Tacoma

Batch #: 1809328.01
Client Project #: N-A
Date Received: 5/16/2018
Samples Received: 7
Samples Analyzed: 7
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 18048547 **Client Sample #: POT-NIM-Remodel-ACM-01**
Location: Port Of Tacoma

Layer 1 of 2	**Description:** Black rubbery material				
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Rubber/Binder	None Detected	ND	**None Detected ND**
Layer 2 of 2	**Description:** Off-white mastic				
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	None Detected	ND	**None Detected ND**

Lab ID: 18048548 **Client Sample #: POT-NIM-Remodel-ACM-02**
Location: Port Of Tacoma

Layer 1 of 4	**Description:** Black rubbery material				
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Rubber/Binder	None Detected	ND	**None Detected ND**
Layer 2 of 4	**Description:** Off-white mastic				
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	None Detected	ND	**None Detected ND**
Layer 3 of 4	**Description:** White compacted powdery material with paint				
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Calcareous binder, Fine particles, Paint	Cellulose	2%	**None Detected ND**
Layer 4 of 4	**Description:** White chalky material with paper				
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Gypsum/Binder, Binder/Filler	Glass fibers	3%	**None Detected ND**

Lab ID: 18048549 **Client Sample #: POT-NIM-Remodel-ACM-03**
Location: Port Of Tacoma

Sampled by: Client
Analyzed by: Lauren Wetzel **Date:** 05/23/2018
Reviewed by: Matt Macfarlane **Date:** 05/25/2018

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

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

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: Port Of Tacoma

Batch #: 1809328.01
Client Project #: N-A
Date Received: 5/16/2018
Samples Received: 7
Samples Analyzed: 7
Method: EPA/600/R-93/116 & EPA/600/M4-82-020

Layer 1 of 3	**Description:** Black rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Rubber/Binder	None Detected	ND	**None Detected ND**
Layer 2 of 3	**Description:** Off-white mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	None Detected	ND	**None Detected ND**
Layer 3 of 3	**Description:** White compacted powdery material with paint and paper			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Calcareous binder, Fine particles, Paint	Cellulose	3%	**None Detected ND**

Lab ID: 18048550 **Client Sample #:** **POT-NIM-Remodel-ACM-04**
Location: Port Of Tacoma

Layer 1 of 4	**Description:** Multi-colored fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Binder/Filler	Synthetic fibers	97%	**None Detected ND**
Layer 2 of 4	**Description:** Beige mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	Synthetic fibers	2%	**None Detected ND**
Layer 3 of 4	**Description:** Yellow mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	Cellulose	4%	**None Detected ND**
		Synthetic fibers	2%	
Layer 4 of 4	**Description:** White compacted powdery material with paint			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Calcareous binder, Fine particles, Paint	Cellulose	2%	**None Detected ND**

Sampled by: Client
Analyzed by: Lauren Wetzel **Date:** 05/23/2018
Reviewed by: Matt Macfarlane **Date:** 05/25/2018

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

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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: Port Of Tacoma

Batch #: 1809328.01
Client Project #: N-A
Date Received: 5/16/2018
Samples Received: 7
Samples Analyzed: 7
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 18048551 **Client Sample #: POT-NIM-Remodel-ACM-05**
Location: Port Of Tacoma

Layer 1 of 3	**Description:** Multi-colored fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Binder/Filler	Synthetic fibers	96%	**None Detected ND**
Layer 2 of 3	**Description:** Beige mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	Synthetic fibers	2%	**None Detected ND**
Layer 3 of 3	**Description:** Yellow mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	Cellulose	3%	**None Detected ND**
		Synthetic fibers	4%	

Lab ID: 18048552 **Client Sample #: POT-NIM-Remodel-ACM-06**
Location: Port Of Tacoma

Layer 1 of 3	**Description:** Multi-colored fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Binder/Filler	Synthetic fibers	94%	**None Detected ND**
Layer 2 of 3	**Description:** Beige mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	Synthetic fibers	3%	**None Detected ND**
Layer 3 of 3	**Description:** Yellow mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Mastic/Binder	Cellulose	2%	**None Detected ND**
		Synthetic fibers	3%	

Sampled by: Client
Analyzed by: Lauren Wetzel **Date:** 05/23/2018
Reviewed by: Matt Macfarlane **Date:** 05/25/2018

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

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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: Port Of Tacoma

Batch #: 1809328.01
Client Project #: N-A
Date Received: 5/16/2018
Samples Received: 7
Samples Analyzed: 7
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 18048553 **Client Sample #:** **POT-NIM-Remodel-ACM-07**
Location: Port Of Tacoma

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

Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
Calcareous binder, Fine particles, Paint	None Detected	ND	**None Detected ND**

Layer 2 of 2 **Description:** White chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:	%	**Asbestos Type: %**
	Cellulose	5%	**None Detected ND**
Gypsum/Binder, Binder/Filler	Glass fibers	10%	

Sampled by: Client
Analyzed by: Lauren Wetzel **Date:** 05/23/2018
Reviewed by: Matt Macfarlane **Date:** 05/25/2018

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

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ASBESTOS LABORATORY SERVICES

Company DH Environmental
Address 1011 SW Klickitat Way Suite 107
Seattle, WA 98134
Project Manager Mr. Brian Johnson.
Phone (206) 930-4043

NVL Batch Number **1809328.00**
TAT 5 Days **AH** No
Rush TAT
Due Date 5/23/2018 **Time** 3:45 PM
Email brian.johnson@dhenviro.com
Fax () -

Project Name/Number: N-A **Project Location:** Port Of Tacoma

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	18048547	POT-NIM-Remodel-ACM-01		A
2	18048548	POT-NIM-Remodel-ACM-02		A
3	18048549	POT-NIM-Remodel-ACM-03		A
4	18048550	POT-NIM-Remodel-ACM-04		A
5	18048551	POT-NIM-Remodel-ACM-05		A
6	18048552	POT-NIM-Remodel-ACM-06		A
7	18048553	POT-NIM-Remodel-ACM-07		A

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

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Nicholas Dossegger		NVL	5/16/18	1545
Analyzed by	Lauren Wetzel		NVL	5/23/18	
Results Called by					
☐ **Faxed** ☐ **Emailed**					

Special Instructions:

Date: 5/16/2018
Time: 4:02 PM
Entered By: Emily Schubert

1809328

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INDUSTRIAL HYGIENE SERVICES
LABORATORY • MANAGEMENT • TRAINING

ASBESTOS CHAIN OF CUSTODY

- ❑ 1 Hour
- ❑ 2 Hours
- ❑ 4 Hours
- ❑ 24 Hours
- ❑ 2 Days
- ❑ 3 Days
- ❑ 4 Days
- ☑ 5 Days
- ❑ 10 Days

Please call for TAT less than 24 Hours

Company DH Environmental
Project Manager Brian Johnson
Address 1011 SW Klickitat Way Suite 107
Seattle, WA 98134
Cell (206) 930-4043
Email brian.johnson@dhenviro.com
Phone 206-930-4043
Fax ( ) -

Project Name/Number
Project Location Port of Tacoma

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

Reporting Instructions Please send results to Brian Johnson
❑ Call ( ) -
❑ Fax ( ) -
☒ Email See above

Total Number of Samples 7

	Sample ID	Description	A/R
1	POT-NIM-Remodel-ACM-01	Coving	
2	POT-NIM-Remodel-ACM-02	Coving	
3	POT-NIM-Remodel-ACM-03	Coving	
4	POT-NIM-Remodel-ACM-04	Carpet & Mastic	
5	POT-NIM-Remodel-ACM-05	Carpet & Mastic	
6	POT-NIM-Remodel-ACM-06	Carpet & Mastic	
7	POT-NIM-Remodel-ACM-07	Drywall	
8			
9			
10			
11			
12			
13			
14			
15			

	Print Name	Signature	Company	Date	Time
Sampled by	Brian Johnson		DH Environmental	5-16-18	1215
Relinquish by	Brian Johnson		DH Environmental	5-16-18	345

Office Use Only

	Print Name	Signature	Company	Date	Time
Received by	DICKD		NVL	5/16	1545
Analyzed by					
Called by					
Faxed/Email by					

May 17, 2018

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

NVL LABS
INDUSTRIAL HYGIENE SERVICES
Laboratory | Management | Training

RE: Metals Analysis; NVL Batch # 1809326.00

Dear Mr. Johnson.,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm) , Percent (%) or mg/cm^2 by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft^2. TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m^3. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more details.

This 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 are discarded after two weeks.

Thank you for using our laboratory services. if you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

for: Nick Ly, Technical Director

ilac-MRA
AIHA LAP, LLC
ACCREDITED LABORATORY
LAB # 101861

1.888.NVL.LABS
1.888.(685.5227)
www.nvllabs.com

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NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

Analysis Report
Total Lead (Pb)

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

Attention: Mr. Brian Johnson.
Project Location: Port Of Tacoma

Batch #: 1809326.00
Matrix: Paint
Method: EPA 3051/7000B
Client Project #: N-A
Date Received: 5/16/2018
Samples Received: 1
Samples Analyzed: 1

Lab ID	Client Sample #	Sample Area (cm^2)	RL in mg/cm^2	Results mg/cm^2
18048545	POT-NIM-Remodel-Pb-01	1.2800	< 0.00800	< 0.00800

Sampled by: Client
Analyzed by: Yasuyuki Hida Date Analyzed: 05/17/2018
Reviewed by: Nick Ly Date Issued: 05/17/2018

for : Nick Ly, Technical Director

mg/ Kg =Milligrams per kilogram
Percent = Milligrams per kilogram / 10000
Note : Method QC results are acceptable unless stated otherwise.
Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

mg/cm^2= Milligrams per square centimeter
RL= Reporting Limit
'<' = Less than Reporting Limit

Bench Run No: 2018-0517-6

LEAD LABORATORY SERVICES

NVL LABS

Company	DH Environmental	**NVL Batch Number**	**1809326.00**
Address	1011 SW Klickitat Way Suite 107 Seattle, WA 98134	**TAT**	5 Days **AH** No
		Rush TAT	
Project Manager	Mr. Brian Johnson.	**Due Date**	5/23/2018 **Time** 3:45 PM
Phone	(206) 930-4043	**Email**	brian.johnson@dhenviro.com
		Fax	() -

Project Name/Number: N-A **Project Location:** Port Of Tacoma

Subcategory Flame AA (FAA)

Item Code FAA-02 **Method** EPA 7000B Lead by FAA <paint>

Total Number of Samples 1 Rush Samples

	Lab ID	Sample ID	Description	A/R
1	18048545	POT-NIM-Remodel-Pb-01		A

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

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Nicholas Dossegger		NVL	5/16/18	1545
Analyzed by	~~Yasuyuki Hida~~		NVL	5/17/18	17:00
Results Called by					
☐ **Faxed** ☐ **Emailed**					

Special Instructions:

Entered By: Emily Schubert Date: 5/16/2018 Time: 3:58 PM

4708 Aurora Ave North, Seattle, WA 98103 | p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

1809326

NVL
INDUSTRIAL HYGIENE SERVICES
LABORATORY • MANAGEMENT • TRAINING

METALS CHAIN OF CUSTODY

Turn Around Time
- ❑ 2 Hour ❑ 4 Hours ❑ 24 Hours
- ❑ 2 Days ❑ 3 Days ❑ 4 Days
- ☑ 5 Days ❑ 6-10 Days
- Please call for TAT less than 24 Hours

Company OH Environmental
Address 1011 SW Klickital Way Suite 107
Seattle, WA 98134
Phone 206-930-4043

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

Project Name/Number
Project Location Port of Tacoma

- ☑ Total Metals ❑ TCLP
- ☑ FAA (ppm ❑ ICP (PPM ❑ GFAA (ppb) ❑ CVAA (ppb)
- ❑ Air Filter ❑ Paint Chips (%) ❑ Soil ☑ Paint Chips (cm) ❑ Dust Wipes ❑ Drinking Water ❑ Waste Water ❑ Other
- RCRA 8: ❑ Barium ❑ Chromium ❑ Silver ❑ Arsenic ❑ Mercury ☑ Lead ❑ Selenium ❑ Cadmium
- RCRA 11: ❑ Copper ❑ Zinc ❑ Other

Reporting Instructions Please send results to Brian Johnson
❑ Call ( ) - ❑ Fax ( ) - ☒ Email see above

Total Number of Samples 1

	Sample ID	Description	A/R
1	POT-NIM-Remodel-Pb-01	Paint chips	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

	Print Name	Signature	Company	Date	Time
Sampled by	Brian Johnson		OH Environmental	5-16-18	1220
Relinquish by	Brian Johnson		OH Environmental	5-16-18	345

Office Use Only

	Print Name	Signature	Company	Date	Time
Received by	NICKD Yasuyuki Hida		NVL	5/16	1545
Analyzed by				5/17/18	1503
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 17025:2005

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 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2017-10-01 through 2018-09-30

Effective Dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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@nvllabs.com
http://www.nvllabs.com

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 102063-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 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

Effective 2017-10-01 through 2018-09-30

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

NVL Laboratories, Inc.

4708 Aurora Avenue N., Seattle, WA 98103

Laboratory ID: 101861

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: June 01, 2019
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: June 01, 2019
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: June 01, 2019
☐	**FOOD**	Accreditation Expires:
✓	**UNIQUE SCOPES**	Accreditation Expires: June 01, 2019

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

William Walsh, CIH
Chairperson, Analytical Accreditation Board

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 15: 03/30/2016

Date Issued: 05/31/2017

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

NVL Laboratories, Inc.
4708 Aurora Avenue N., Seattle, WA 98103

Laboratory ID: **101861**
Issue Date: 05/31/2017

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 04/01/1997

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte (*for internal methods only*)
Spectrometry Core	Inductively-Coupled Plasma	ICP/AES	EPA 3051	
			NIOSH 7300 Modified	
	X-ray Diffraction (XRD)		NIOSH 7500	
Asbestos/Fiber Microscopy Core	Phase Contrast Microscopy (PCM)		NIOSH 7400	
Miscellaneous Core	Gravimetric		NIOSH 0500 Modified	
			NIOSH 0600 Modified	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

NVL Laboratories, Inc.
4708 Aurora Avenue N., Seattle, WA 98103

Laboratory ID: **101861**
Issue Date: 05/31/2017

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 02/07/1997

Field of Testing (FoT)	Technology sub-type/ Detector	Method	Method Description (*for internal methods only*)
Paint		EPA SW-846 3051	
		EPA SW-846 7000B	
Soil		EPA SW-846 3051	
		EPA SW-846 7000B	
Settled Dust by Wipe		EPA SW-846 3051	
		EPA SW-846 7000B	
Airborne Dust		EPA SW-846 3051	
		NIOSH 7082	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

NVL Laboratories, Inc.
4708 Aurora Avenue N., Seattle, WA 98103

Laboratory ID: **101861**
Issue Date: 05/31/2017

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 02/01/1997

EMLAP Category	Field of Testing (FoT)	Method	Method Description (*for internal methods only*)
Fungal	Air - Direct Examination	SOP 12.133	In-House: Analysis of Spore Trap
	Bulk - Direct Examination	SOP 12.133	In-House: Bulk Analysis
	Surface - Direct Examination	SOP 12.133	In-House: Surface Analysis

A complete listing of currently accredited Environmental Microbiology laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

NVL Laboratories, Inc.
4708 Aurora Avenue N., Seattle, WA 98103

Laboratory ID: **101861**
Issue Date: 05/31/2017

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Unique Scopes Laboratory Accreditation Program (Unique Scopes)

Initial Accreditation Date: 04/01/2013

Unique Scope Category	Field of Testing (FoT)	Method	Method Description (*for internal methods only*)
Consumer Product Testing	Lead in Paint and Other Similar Surface Coatings	CPSC-CH-E1003-09.1	
	Total Lead in Metal Children's Products	CPSC-CH-E1001-08.2	
	Total Lead in Non-Metal Children's Products	CPSC-CH-E1002-08.1	

A complete listing of currently accredited Unique Scope laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Attachment 4 Inspector Certifications

25511-4119147-540410

THE ASBESTOS INSTITUTE

Certifies that BRIAN JOHNSON

has attended the EPA approved course

AHERA Building Inspector Refresher

and successfully passed and completed
the competency exam.

This training meets all requirements for asbestos
accreditation under TSCA Title II.

THE ASBESTOS INSTITUTE
arizona - california - nevada
EST. 1988

Issue Date : 21-Jun 2017

Expiration Date : 21-Jun 2018

Approved Instructor

20033 N. 19th Avenue, Building 6, Phoenix, AZ 85027
602 -8 64 - 6564 - www.theasbestosinstitute.com

Certificate of Completion

This is to certify that

Sellers M. Weatherall

has satisfactorily completed
24 hours of training as an

AHERA Building Inspector

to comply with the training requirements of
TSCA Title II, 40 CFR 763 (AHERA)

165179
Certificate Number

ARGUS PACIFIC
TRAINING • CONSULTING
A Terracon COMPANY

Jan 17 - 19, 2018 Expires in 1 year.
Date(s) of Training

Exam Score:
If appropriate: 80

Instructor

ARGUS PACIFIC, INC / 1900 WEST NICKERSON ST, SUITE 315 / SEATTLE, WASHINGTON 98119 / 206.285.3373 / ARGUSPACIFIC.COM

CITY OF TACOMA

Planning and Development Services
(253) 591-5030

747 Market St.
Tacoma, WA 98402
Inspections (253) 573-2587

COMMERCIAL ALTERATION PERMIT # BLDCA18-0150

ISSUED: 05/23/2018
EXPIRES: 11/19/2018

PO Number: N/A

SITE INFORMATION	PARCEL OWNER	ISSUED TO
Parcel No.: 2275200610	PORT OF TACOMA	PORT OF TACOMA
711 PORT OF TACOMA RD,	PORT OF TACOMA PO BOX 1837	PORT OF TACOMA PO BOX 1837
TACOMA, WA 98421	TACOMA WA, 984011837	TACOMA WA, 984011837

PROJECT DESCRIPTION

REMODEL
NIM TOWER 4th Floor Renovations
Remodel of 4th floor at commercial location including patch of walls and ceiling, new cabinets, counters, and sink.

Total Value: $65,000.00
Permit Fee: $2,309.14
Payment Info: Credit Card

Number of Units:		Floor Count:	
Zoning:	PMI	Total Floor Area:	
Estimated Value:	65000	Attached Garage:	
Stormwater:		Deck:	
Construction Type:	IIA	Porches:	
Occupancy Group:		Auto Fire Alarm:	
		Auto Fire Ext. Sys:	

CONDITIONS OF APPROVAL

PERMIT 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, plumbing, mechanical, fire protection and signs.

X _____

THIS PERMIT SHALL BECOME NULL AND VOID IF ANY OF THE ABOVE INFORMATION IS FOUND TO BE INCORRECT

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. All required off-site improvements (curbs, sidewalks, storm sewers, etc.) must be completed at time of 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 WSDOT/APWA 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 Right of Way 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 Site & Building 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. Site & Building 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.

BLDCA18-0150 Approved Review Tasks

Category	Approved By	Email
Building Review	Lucas Shadduck	lshadduc@cityoftacoma.org
Critical Areas Review	Jessica Malaier	jmalaier@cityoftacoma.org
Critical Areas Review	John Griffith	jgriffith@cityoftacoma.org
Critical Areas Review	Shannon Brenner	sbrenner@cityoftacoma.org
Flood Hazard Review	John Griffith	jgriffith@cityoftacoma.org
Flood Hazard Review	Terry Forslund	tforslun@ci.tacoma.wa.us
Steep Slopes Review	Craig Kuntz	ckuntz@cityoftacoma.org

Inspection Record Card

Planning and Development Services

Schedule online at TacomaPermits.org/Inspections

Or call at:

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

Site

Right-of-Way and Storm & Sanitary Conveyance	253-573-2587
All Right-of-Way, Storm & Sanitary work including: Oil Water Separator, Grease Traps, Storm Water Filter Devices & Source Control Inspections	253-591-5760

Land Use

Zoning/Landscaping Final	253-591-5577

RECORD NUMBER BLDCA18-0150
DATE ISSUED May 23, 2018 **TO** PORT OF TACOMA
ADDRESS 711 Port Of Tacoma Rd
WORK DESCRIPTION Remodel of 4th floor at commercial location including patch of walls and ceiling, new cabinets, counters, and sink.

Request All That Apply	Inspection Schedule	Date	BY
	Initial Erosion Control (BMP) for clearing and grading		
	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		
	Rough-in/Set Storm & Sanitary Device		
	Rough-in/Set Storm & Sanitary Conveyance		
	Erosion Control Maintenance (BMP)		
	Building Framing and Caulking		
	Insulation		
Required Before The Building Final Inspection	Drywall		
	Suspended Ceiling (see back of card)		
	Plumbing Final		
	Mechanical Final		
	Electrical Final		
	Storm and Sanitary Device Final		
	Storm and Sanitary Conveyance Final		
	Sidewalk, Curb & Gutter, Driveway		
	Final Erosion Control & Site Stabilization (BMP)		
	Building Final (see back of card)		

WARNING: It is unlawful to occupy the premises until all applicable final inspections have been made.

SUPPLEMENTAL INSPECTIONS ON THE BACK

WORK DESCRIPTION Remodel of 4th floor at commercial location including patch of walls and ceiling, new cabinets, counters, and sink.

Supplemental Erosion Control Inspections		Commercial Building Inspections That May Apply	
	By / Date		By / Date
Initial Inspection:		Electrical for Ceiling Cover	
Maintenance Inspection:		Mechanical for Ceiling Cover	
Maintenance Inspection:		Fire/Sprinkler for Ceiling Cover	
Maintenance Inspection:		Building for Ceiling Cover	
Maintenance Inspection:		Fire/Sprinkler **FINAL**	
Maintenance Inspection:		Water/Backflow **FINAL** (253-502-8215)	
		Zoning/Landscaping **FINAL**	
		Boiler **FINAL** (253-596-3902)	

Comments

Related Records:

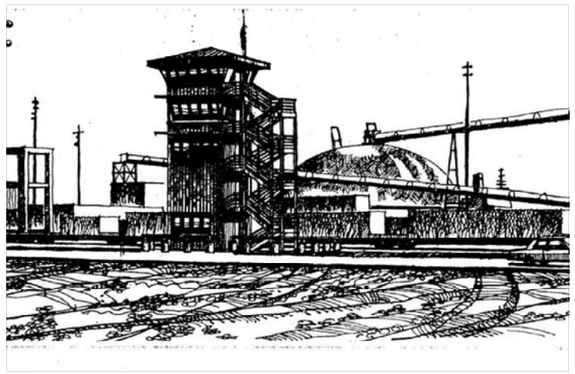
Record Type:	Record Number:
Commercial Plumbing	PLMBC18-0111

BINDING EDGE

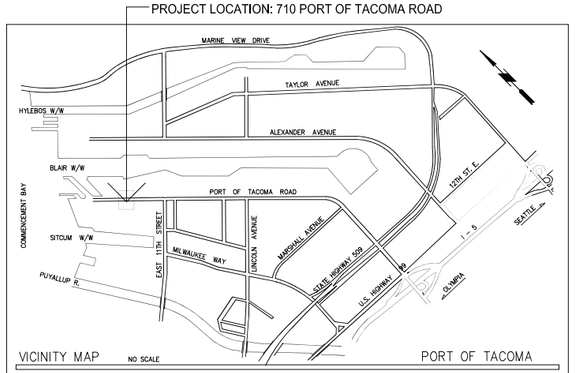
PORT OF TACOMA

NIM TOWER FOURTH FLOOR RENOVATIONS

Project No. 201043.01
CONTRACT NO.



PROJECT LOCATION: 710 PORT OF TACOMA ROAD



PORT COMMISSIONERS:

JOHN McCARTHY
DON MEYER
DONALD C. JOHNSON
RICHARD P. MARZANO
CLARE PETRICH

PORT STAFF:

JOHN WOLFE
Chief Executive Officer

DAKOTA CHAMBERLAIN
Director of Facilities Development

JAYNE VANDENBERG, PE
Director of Engineering

HUGHES WIKE, PE
Project Manager

CITY OF TACOMA PLAN APPROVAL

CATEGORY	APPROVED BY	DATE	PRE-CON YES	PRE-CON NO
BUILDING	Lucas Shadduck	MAY 15, 2018	☐	☒
STRUCTURAL	Not Applicable		☐	☐
ENERGY	Not Applicable		☐	☐
FIRE			☐	☐
PLUMBING	Lucas Shadduck	MAY 15, 2018	☐	☒
MECHANICAL	Not Applicable		☐	☐
ZONING			☐	☐
LANDSCAPING			☐	☐
ENVIRONMENTAL			☐	☐
CAPO	Shannon Brenner	MAY 18, 2018	☐	☒
STEEP SLOPE	Not Applicable		☐	☐
TRAFFIC			☐	☐
URBAN FORESTRY			☐	☐
SITE DEVELOPMENT			☐	☐
SANITARY SEWER			☐	☐
STORM SEWER			☐	☐
SOURCE CONTROL			☐	☐
REAL PROPERTY SERV.			☐	☐
SOLID WASTE			☐	☐
HISTORICAL			☐	☐
HEALTH DEPT.			☐	☐
TPU WATER			☐	☐
TPU POWER			☐	☐
WATER QUALITY			☐	☐
IN LIEU OF ASSESSMENT			☐	☐

TETRA TECH
1420 Fifth Avenue Suite 600
Seattle, WA 98101
www.tetratech.com

CONSULTANT:

PROJECT DATA:

1. ADDRESS: 710 PORT OF TACOMA ROAD
2. ACCESSOR'S PARCEL: # 2275200610
3. LEGAL DESCRIPTION: SECTION 27 TOWNSHIP RANGE 03 QUARTER 43 ASHTONS RPT BLKS 13-48 TAC TDLDS 126.150 AC B 15 & 1.274 AC B 15A TOG/W POR VAC E 11TH ST ABUTT PER ORD 25746 DC7/1/98JU
4. USE: RAIL YARD CONTROL TOWER (1988) - NO CHANGE OF USE
5. OCCUPANCY: B-2

   CONSTRUCTION TYPE: II - 1 Hr - SPRINKLERED

   FOURTH FLOOR AREA: 484 SF

   ADA ACCOMMODATIONS: NONE, EXEMPT - STAIR ACCESS ONLY

PROJECT DESCRIPTION:

1. NO EXTERIOR IMPROVEMENTS & NO CHANGES TO BUILDING ENVELOPE.
2. REMOVE & REPLACE EXISTING CABINETS & COUNTERTOPS
3. REPLACE EXISTING LIGHTING FIXTURES
4. ADD NEW UNDERCOUNTER REFRIGERATORS
5. PATCH & PAINT EXISTING WALLS & CEILINGS
6. INSTALL NEW FLOOR COVERING & BASE
7. ADD NEW HAND SINK

DRAWING LIST

SHEET DESIGNATION	SHEET #	NAME	REVISION
G1	1	COVER SHEET - DRAWING INDEX	0
G2	2	SYMBOLS & ABBREVIATIONS	0
A1	3	FLOOR PLAN & REFLECTED CEILING PLAN	0
A2	4	INTERIOR ELEVATIONS	0
M1	5	FOURTH FLOOR PLUMBING PLAN	0
E1	6	ELECTRICAL SYMBOLS	0
E2	7	ELECTRICAL FLOOR PLANS	0
E3	8	ELECTRICAL ONE-LINE AND SCHEDULES	0
	9		0
	10	**REFERENCE DRAWINGS**	0
REF #1	11	REFERENCE DRAWING - ORIGINAL SITE PLAN 1988	0
	12		0
	13		0
	14		0
	15		0
	16		0
	17		0
	18		0
	19		0
	20		0

TETRA TECH
www.tetratech.com
1420 Fifth Avenue, Suite 600
Seattle, Wa 98101
Tel 206.883.9400 Fax 206.883.9301

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841

MARK:	REVISION:	BY:	APPR:	DATE:

REGISTERED ARCHITECT
M. MARCEL BODSKY
STATE OF WASHINGTON
7006

CHECKED BY	DATE
PROJ. ENGR	DATE

DIRECTOR ENG.: DATE
PRINTED BY: thomas.roth Apr 13, 2018
PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837
DRAWING SCALE: AS NOTED
SECTION: 22 1933
RANGE: @ Tide
VERT: MLLW 19.39'
TOWNSHIP:
DAT-HRZ: WA83-SF
PARCEL:

APPROVED:

NIM TOWER
FOURTH FLOOR RENOVATIONS
COVER SHEET - DRAWING INDEX

#6581
G1
SH #1 OF #

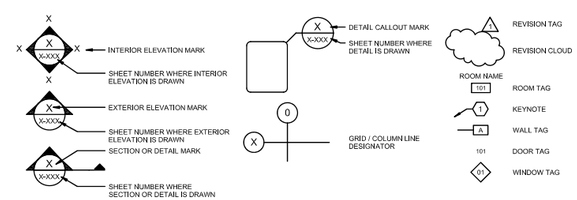
CONT/CO #S: 070781
M. ID: 201036.01
PHASE: PERMITTING

PORT OF TACOMA FILE: P:\360780\200-36078-17001-06\CAD\SheetFiles\G1 Cover

BINDING EDGE

ABBREVIATIONS

A	
(A)	AS DESCRIBED
A LABEL	A LABEL CLASS DOOR
A/C	AIR CONDITIONING UNIT
AB	ANCHOR BOLT
ABDN	ABANDON
ACC	ACCESSIBLE
ACI	AMERICAN CONCRETE INSTITUTE
ACOUST	ACOUSTIC(AL)
ACP	ACOUSTICAL CEILING PANEL
ACS	AUTOMATIC CONTROL SYSTEM
ACT	ACOUSTICAL CEILING TILE
ACU	AIR CONDITIONING UNIT
ADA	AMERICANS WITH DISABILITIES ACT
ADD	ADDITIONAL ADMIN ADMINISTRATION
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHU	AIR HANDLING UNIT
AIB	AIR INFILTRATION BARRIER
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZE
ANT	ANTENNA
APPROX	APPROXIMATE(LY)
APVD	APPROVED
AR	AS REQUIRED
ARCH	ARCHITECT(URAL)
ASC	ABOVE SUSPENDED CEILING
ASSY	ASSEMBLY
ATFP	ANTI-TERRORISM / FORCE PROTECTION
AVG	AVERAGE
AW	ARCHITECTURAL WOODWORK
AWT	ACOUSTICAL WALL TREATMENT
B	
B LABEL	B LABEL CLASS DOOR
BALC	BALCONY
BB	BASEBOARD
BD	BOARD
BFF	BELOW FINISH FLOOR
BHMA	BUILDER'S HARDWARE MANUFACTURER'S ASSOCIATION
BL	BASELINE
BLDG	BUILDING
BLKG	BLOCKING
BLT IN	BUILT-IN
BM	BEAM
BM	BENCH MARK
BN	BULLNOSE
BOF	BOTTOM OF FOOTING
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BP	BUILDING PAPER
BRG	BEARING
BRKT	BRACKET
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT UP ROOF
C	
C	CENTER POINT
(C)	CALCULATED
C CONC	CAST CONCRETE
C LABEL	C LABEL CLASS DOOR
C-C	CENTER TO CENTER
CAB	CABLE
CATW	CATWALK
CAV	CAVITY
CB	CATCH BASIN
CB	CEMENTITIOUS (BACKER) BOARD
CBB	CEMENTITIOUS BACKER BOARD
CD	CONSTRUCTION DOCUMENT(S)
CDW	CHILLED DRINKING WATER
CEM PLAS	CEMENT PLASTER
CER	CERAMIC
CF	CONTRACTOR FURNISHED
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CFE	CONTRACTOR FURNISHED EQUIPMENT
CFLG	COUNTER FLASHING
CFM	CUBIC FEET PER MINUTE
CFMF	COLD FORM METAL FRAMING
CFS	CUBIC FEET PER SECOND
CFT	CERAMIC FLOOR TILE
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLG DIFF	CEILING DIFFUSER
CLG HT	CEILING HEIGHT
CLL	COLUMN LINE
CLO	CLOSET
CLR	CLEAR
CLRM	CLASSROOM
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNDS	CONDENSATE
CO	CLEANOUT
COL	COLUMN
COMM	COMMUNICATIONS
CONC	CONCRETE
CONC FLR	CONCRETE FLOOR
CONF	CONFERENCE
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
CP	CONCRETE PIPE
CPP	CORRUGATED PLASTIC PIPE
CPT	CARPET
CR	CONTROL ROOM
CS	CAST STONE
CSWK	CASEWORK
CT	CERAMIC TILE
CTB	CERAMIC TILE - BASE
CTF	CERAMIC TILE - FLOOR
CTR	CENTER
CTW	CERAMIC TILE - WALL
CU FT	CUBIC FEET
CW	CASEMENT WINDOW
CWT	CERAMIC WALL TILE
D	
D	DEPTH
D LABEL	D LABEL CLASS DOOR
DBL	DOUBLE
DEMO	DEMOLISH
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DIST	DISTANCE
DK	DECK
DN	DOWN
DOC	DOCUMENT
DR	DOOR
DS	DOWNSPOUT
DWG(S)	DRAWING(S)
E	
E	EAST
E LABEL	E LABEL CLASS DOOR
EA	EACH
EB	ELECTRICAL RISER
EF	EACH FACE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATOR
ELEC	ELECTRIC(AL)
ELEV	ELEVATION
ENGR	ENGINEER
ENTR	ENTRY
EOA	EDGE OF ASPHALT
EOC	EDGE OF CONCRETE
EOG	EDGE OF GUTTER
EM	ELECTRICAL METER
EP	EXPLOSION PROOF
EPS	EXPANDED POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
ET	ELECTRICAL TRANSFORMER
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXP	EXPOSED
EXP AB	EXPANSION ANCHOR BOLT
EXPN	EXPANSION
EXPT	EXTERIOR PAINT
EXT	EXTERIOR
EXT GR	EXTERIOR GRADE
F	
F	FOUND
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FAS BD	FASCIA BOARD
FC BRK	FACE BRICK
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FDC	FIRE DEPT CONNECTION
FDTN	FOUNDATION
FEC	FIRE EXTINGUISHER CABINET
FED	FEDERAL
FF	FINISH FLOOR
FF INSUL	FOIL FACED INSULAITON
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FGL	FIBERGLASS
FH	FIRE HOSE
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH (ED)
FIXT	FIXTURE
FL	FLOOR
FLDG	FOLDING
FLEX	FLEXIBLE
FLMT	FLUSH MOUNTED
FLR	FLOOR
FLUOR	FLUORESCENT
FM	FACTORY MUTUAL
FO	FIBER OPTIC
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STEEL
FR	FIRE RESISTANT
FRG	FIBER REINFORCED GYPSUM
FRMG	FRAMING
FRP	FIBERGLASS REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FT	FOOT
FTG	FOOTING
FUR	FURRING
FWC	FABRIC WALLCOVERING
G	
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GFCI	GOVERNMENT FURNISHED / CONTRACTOR INSTALLED
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GL	GRID LINE
GLZ	GLAZING
GM	GAS METER
GR FL	GROUND FLOOR
GRTG	GRATING
GS	GRATING SUPPORT
GV	GRAVEL
GV	GAS VALVE
GWB	GYPSUM WALL BOARD
GYP GYPSUM	
H	
H	HORN
HB	HOSE BIB
HC	HOLLOW CORE
HDPE	HIGH DENSITY POLYETHYLENE
HDW	HARDWARE
HDWD	HARDWOOD
HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER
HGT	HEIGHT
HK	HOOK
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
HSS	HOLLOW STRUCTURAL SECTION
HVAC	HEATING VENTILATION AND AIR CONDITIONING
HW, HDWR	HARDWARE
HYD	HYDRAULIC
I	
IBC	INTERNATIONAL BUILDING CODE
ICF	INSULATED CONCRETE FORM
IF	INSIDE FACE
IG	INSULATING GLASS
IJ	ISOLATION JOINT
ILO	IN LIEU OF
IN	INCH
INCAND	INCANDESCENT
INSUL	INSULATION
INV	INVERT
IP	IRON PIPE
IR	IRON ROD
IRP	INSULATED ROOF PANEL
IRRV	IRRIGATION VALVE
ITG	INSULATED TEMPERED GLASS
IWP	INSULATED WALL PANEL
J	
J	JUNCTION BOX
JAN	JANITOR
JBL	JURISDICTIONAL BOUNDARY LINE
JST	JOIST
JT	JOINT
K	
KIT	KITCHEN
KPD	KEYPAD
KPL	KICKPLATE
L	
LAM	LAMINATE
LAV	LAVATORY
LBR	LUMBER
LBS	POUNDS
LDG	LANDING
LF	LINEAR FOOT (FEET)
LG	LONG
LIB	LIBRARY
LIN	LINEAR
LKR	LOCKER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNT	LINTEL LOC LOCATION
LOC	LOCATION
LOCS	LOCATIONS
LP	LIGHT POLE
LS	LABORATORY SINK
LT	LIGHT
LVDR	LOUVER DOOR
LVR	LOUVER
M	
M	METERS
(M)	MEASURED
MATL	MATERIAL
MAX	MAXIMUM
MB	MOISTURE BARRIER
MC	MOISTURE CONTENT
MD	METAL DECK
MECH	MECHANICAL (ROOM)
MEMB	MEMBRANE
MF	MILL FINISH
MFR	MANUFACTURER
MH	MAN HOLE
MID	MIDDLE
MIN	MINIMUM
MIRR	MIRROR
MO	MASONRY OPENING
MOD	MODIFY
MRGWB	MOISTURE RESISTANT GYPSUM WALLBOARD
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MW	MONITORING WELL
MWP	MEMBRANE WATERPROOFING
N	
N	NORTH
NA	NOT APPLICABLE
ND	NAIL & DISK
ND	NAPKIN DISPOSAL
NDS	NAPKIN DISPENSER
NE	NORTH EAST
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NAIL
NO	NUMBER
NOM	NOMINAL
NP	NO PAINT
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
NW	NORTHWEST
O	
OTO	OUT TO OUT
OA	OVERALL
OC	ON CENTER
OCC	OCCUPANCY
OD	OUTSIDE DIAMETER
OE	OVERHEAD UTILITY LINES
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFD	OVERFLOW DRAIN
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OGL	OBSCURE GLASS
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPQ	OPAQUE
OPR	OPERABLE
ORIG	ORIGINAL
OSB	ORIENTED STRAND BOARD
OTS	OPEN TO STRUCTURE
OWSJ	OPEN WEB STEEL JOIST
OZ	OUNCE
P	
P	POST
(P)	PER PLAT
PA	PUBLIC ADDRESS
PAR	PARAPET
PAT	PATTERN
PB	PLAT BOOK
PB	PULL BOX
PBD	PARTICLE BOARD
PCC	PRECAST CONCRETE
PCF	POUND PER CUBIC FOOT
PCT	PERCENT
PEMB	PRE-ENGINEERED METAL BUILDING
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PG	PAGE
PH	PHASE
PIL	PILASTER
PK	PK NAIL
PL	PROPERTY LINE
PL GL	PLATE GLASS
PLAM	PLASTIC LAMINATE
PLAS	PLASTIC
PLBG	PLUMBING
PLG	PILING
PLYWD	PLYWOOD
PNL	PANEL
POC	POINT OF CONTACT
POLY	POLYSTYRENE
PP PL	PUSH/PULL PLATE
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATED
PRKG	PARKING
PS CONC	PRESTRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED, PAINT
PTD	PAPER TOWEL DISPENSER
PTDR	PAPER TOWEL DISPENSER AND RECEPTACLE
PTN	PARTITION
PVDF	POLYVINYLIDENE FLUORIDE
PWR	POWER
Q	
QT	QUARRY TILE
QTY	QUANTITY
R	
R	RISER
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RCP	REINFORCED CONC PIPE
RD	ROOF DRAIN
REC	RECESSED
REF	REFERENCE
REFR	REFRIGERATOR
REM	REMOVABLE
REP	REPAIR
REQ	REQUIRE
REQ'D	REQUIRED
RESIL	RESILIENT
REV	REVISION
RF	RESILIENT FLOORING
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RL	ROOF LEADER
RLG	RAILING
RM	ROOM
RO	ROUGH OPENING
RR	RESTROOM
RR	RAILROAD
RSD	ROLLING STEEL DOOR
RV	ROOF VENT
RVL	REVEAL
S	
S	SET
S	SOUTH
S2S	SURFACE TWO SIDES
S4S	SURFACE FOUR SIDES
SAPC	SUSPENDED ACOUSTICAL PANEL CEILING
SATC	SUSPENDED ACOUSTICAL TILE CEILING
SB	SPLASH BLOCK
SC	SHOWER CURTAIN
SC	SECTION CORNER
SCHED	SCHEDULE
SCR	SHOWER CURTAIN ROD
SCW	SOLID CORE WOOD
SCWD	SOLID CORE WOOD DOOR
SD	SMOKE DETECTOR
SD	STORM DRAIN
SE	SOUTH EAST
SF	SQUARE FOOT
SF	SQUARE FEET
SFTWD	SOFT WOOD
SGL	SINGLE
SH	SOAP HOLDER
SHR	SHOWER
SHT MTL	SHEET METAL
SHTHG	SHEATHING
SHV	SHELVING
SIM	SIMILAR
SJ	SCORED JOINT
SKLT	SKYLIGHT
SLNT	SEALANT
SLR	SEALER
SM	SQUARE METER
SMHD	SHELF METAL HEAVY DUTY
SMK	SMOKE
SMLS	SEAMLESS
SND	SANITARY NAPKIN AND TAMPON DISPENSER
SP EL	SPOT ELEVATION
SPEC	SPECIFICATIONS
SPF	SPRAY APPLIED POLYURETHANE FOAM INSULATION
SPIG	WATER SPIGOT
SQ	SQUARE
SQ FT	SQUARE FOOT (FEET)
SQ IN	SQUARE INCH
SQ M	SQUARE METER
SQ YD	SQUARE YARD
SS	STAINLESS STEEL
SS	SANITARY SEWER
SSMR	STANDING SEAM METAL ROOF
ST	STAIRS, STAIN
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STL JST	STEEL JOIST
STL RF DK	STEEL ROOF DECK
STOR	STORAGE
STR	STRINGER
STRB/HRN	STROBE / HORN
STRUCT	STRUCTURE(AL)
SUB FL	SUB FLOOR
SUSP	SUSPENDED
SV	SHEET VINYL
SV	SANITARY SEWER VALVE
SW	SOUTHWEST
SYM	SYMMETRICAL
T	
T	TREAD
T&G	TONGUE AND GROOVE
T/S	TUB / SHOWER
TB	TOWEL BAR
TB	TELEPHONE RISER
TC	TERRA COTTA
TD	TRAVEL DISTANCE
TEL	TELEPHONE
TEMP	TEMPORARY
TER	TERRAZZO
TFF	TOP OF FINISH FLOOR
THK	THICKNESS
TK BD	TACK BOARD
TLT	TOILET
TMPD GL	TEMPERED GLASS
TN	TRUE NORTH
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB
TP	TRANSVERSE POINT
TRANS	TRANSOM
TRTD	TREATED
TS	TUBE STEEL
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
TV	CABLE TELEVISION
TYP	TYPICAL
U	
UE	UNDERGROUND UTILITY LINES
UNF	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VR	VAPOR RETARDER
VTC	VIDEO TELECONFERENCE
VTR	VENT THROUGH ROOF
W	
W	WATER
W	WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WG	WIRE GLASS
WM	WATER METER
WOM	WALK OFF MAT
WR	WASTE RECEPTACLE
WRB	WEATHER RESISTANT BARRIER
WRGWB	WATER RESISTANT GYPSUM WALLBOARD
WS	WATER STOP
WTP	WATER TREATMENT PLANT
WV	WATER VALVE
WWTP	WASTE WATER TREATMENT PLANT
X	
XC	X CUT



DRAWING SYMBOLS

PORT OF TACOMA FILE: P:\360780\200-36078-17001-06\CAD\SheetFiles\G2 Abbreviations

TETRA TECH
www.tetratech.com
1420 Fifth Avenue, Suite 600
Seattle, Wa 98101
Tel 206.883.9300 Fax 206.883.9301

MARK:	REVISION:	BY:	APPR:	DATE:

REGISTERED ARCHITECT
M. MARCEL BODSKY
STATE OF WASHINGTON
7006

Port of Tacoma
P.O. Box 1837 Tacoma, Wa 98401-1837

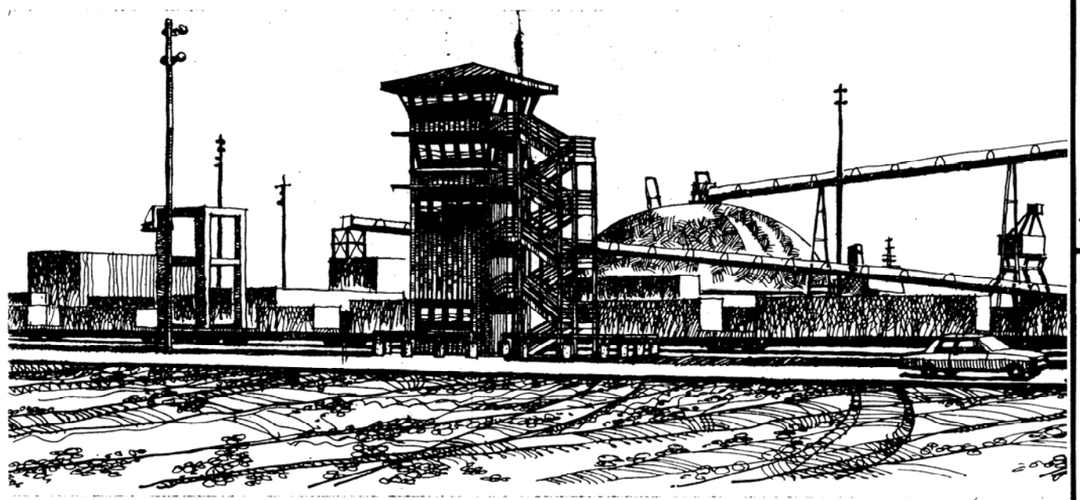
APPROVED:			
	CHECKED BY		DATE
DIRECTOR ENG.		PROJ. ENGR	DATE
PRINTED BY:	thomas.roth Apr 13, 2018		
PORT ADDRESS:	ONE SITCUM PLAZA		
	TACOMA, WA 98401-1837		

NIM TOWER
FOURTH FLOOR RENOVATIONS
SYMBOLS & ABBREVIATIONS

TOWNSHIP:	20	RANGE:	1
SECTION:	30	VERT:	MLLW 19.39' @ Title 22 1933
DAT-HRZ:	WA83-SF	DRAWING SCALE:	AS NOTED
PARCEL:	070781		
PERMITTING	201036.01		
PHASE			

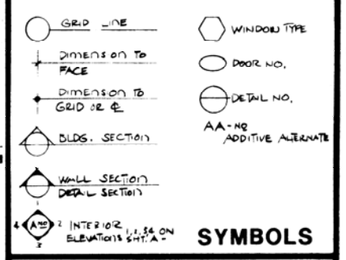
#6581
G2
SH #2 OF #

BINDING EDGE



RENDERING SHOWN FOR REFERENCE ONLY. NOT TOTALLY ACCURATE

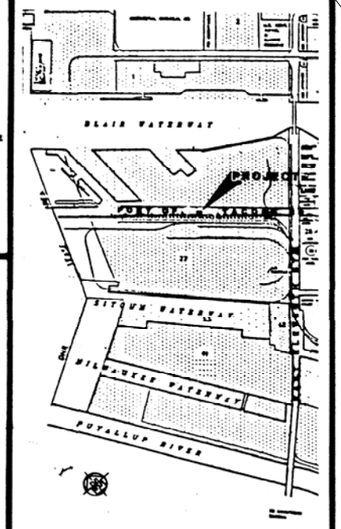
PERSPECTIVE



SYMBOLS

USE:	Control Tower
CODE:	1985 U.B.C.
OCCUPANCY:	B2 (with special provision in Appendix, Division II, Aviation Control Tower)
CONSTRUCTION:	II-1 Hr. Sprinkled
ALLOWABLE AREA:	1,500 s.f./floor x 5 = 7,500
ACTUAL AREA:	484 s.f./floor x 5 = 2,420
ALLOWABLE HEIGHT:	100 feet
ACTUAL HEIGHT:	52 feet
OCCUPANCY LOAD:	Allowable: 15/floor x 5 = 75 Actual: 46+

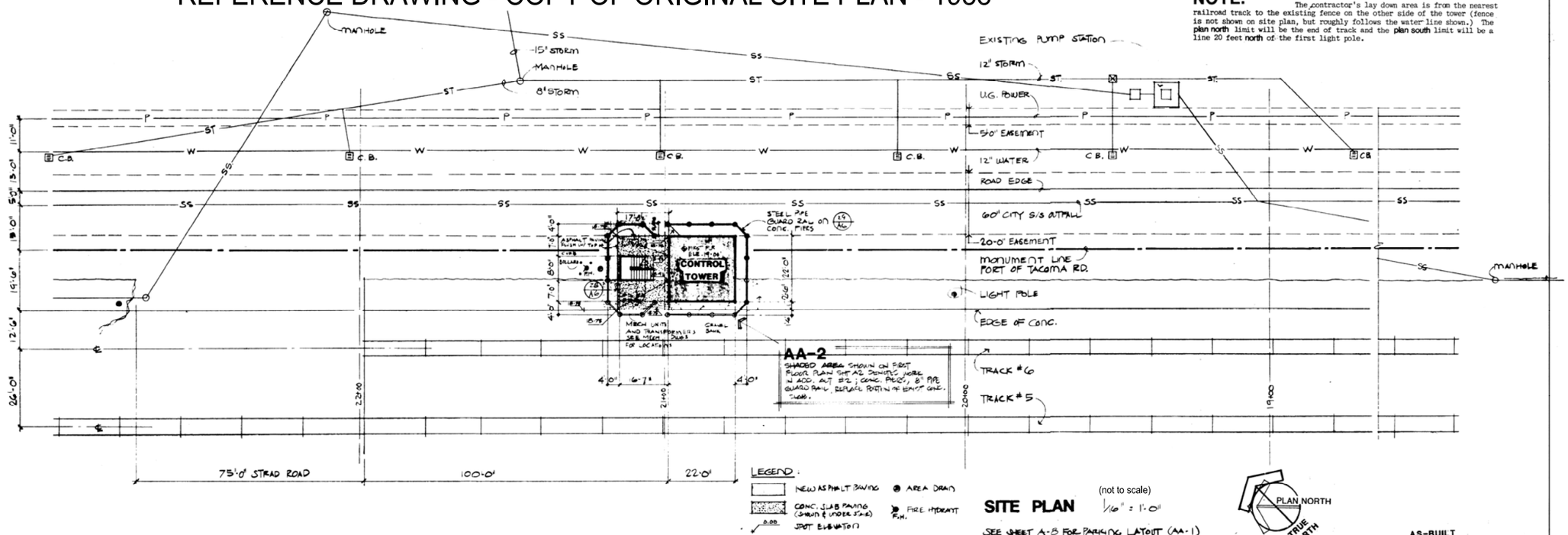
BUILDING DATA



VICINITY MAP

INDEX TO DRAWINGS

REFERENCE DRAWING - COPY OF ORIGINAL SITE PLAN - 1988



NOTE: The contractor's lay down area is from the nearest railroad track to the existing fence on the other side of the tower (fence is not shown on site plan, but roughly follows the water line shown.) The **plan north** limit will be the end of track and the **plan south** limit will be a line 20 feet **north** of the first light pole.

SITE PLAN (not to scale) 1/16" = 1'-0"

SEE SHEET A-8 FOR PARKING LAYOUT (AA-I)

AS-BUILT

PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(206)383-5841

CONSULTANTS
RBML
RUE · BUTLER · MARSHALL · LAMB, Architects, PS
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732 pacific ave., tacoma, wa 98402 · (206) 383-1011

REGISTERED ARCHITECT THOMAS J. BUTLER STATE OF WASHINGTON

APPROVED
R P Grace Lod
CHIEF ENGINEER 11/12/88 DATE

C.N.T 11-10-87 DRAWN BY DATE
AS-BUILT BY DATE
CHECKED BY DATE
PROJ.ENGR. DATE

MARK	REVISION	BY	APP.	DATE

CONTROL TOWER
FOR NORTH INTERMODAL YARD
(SITE PLAN AND INFORMATION)

DRAWING No. EP 4200-4
CONTRACT No. 622B
SHEET No. A1 OF 9

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MARK:	REVISION:	BY:	APPR:	DATE:

REGISTERED ARCHITECT
7006
M. MARCEL BOOSKY
STATE OF WASHINGTON

APPROVED:
DIRECTOR ENG. DATE
CHECKED BY DATE

NIM TOWER
FOURTH FLOOR RENOVATIONS
REFERENCE DRAWING - ORIGINAL SITE PLAN 1988

PRINTED BY: thomas.roth Apr 13, 2018
PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837
DRAWING SCALE: AS NOTED

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#6581
REF #1
SH #1 OF #

CONTRACT:	070781	TOWNSHIP:	RANGE:
M. ID:	201036.01	DAT-HRZ:	WA83-SF
PHASE:	PERMITTING	PARCEL:	

SECTION:
VERT: MLLW 19.39' @ Tide 22 1933

PORT OF TACOMA FILE: P:\360780\200-36078-17001-06\CAD\SheetFiles\REF #1

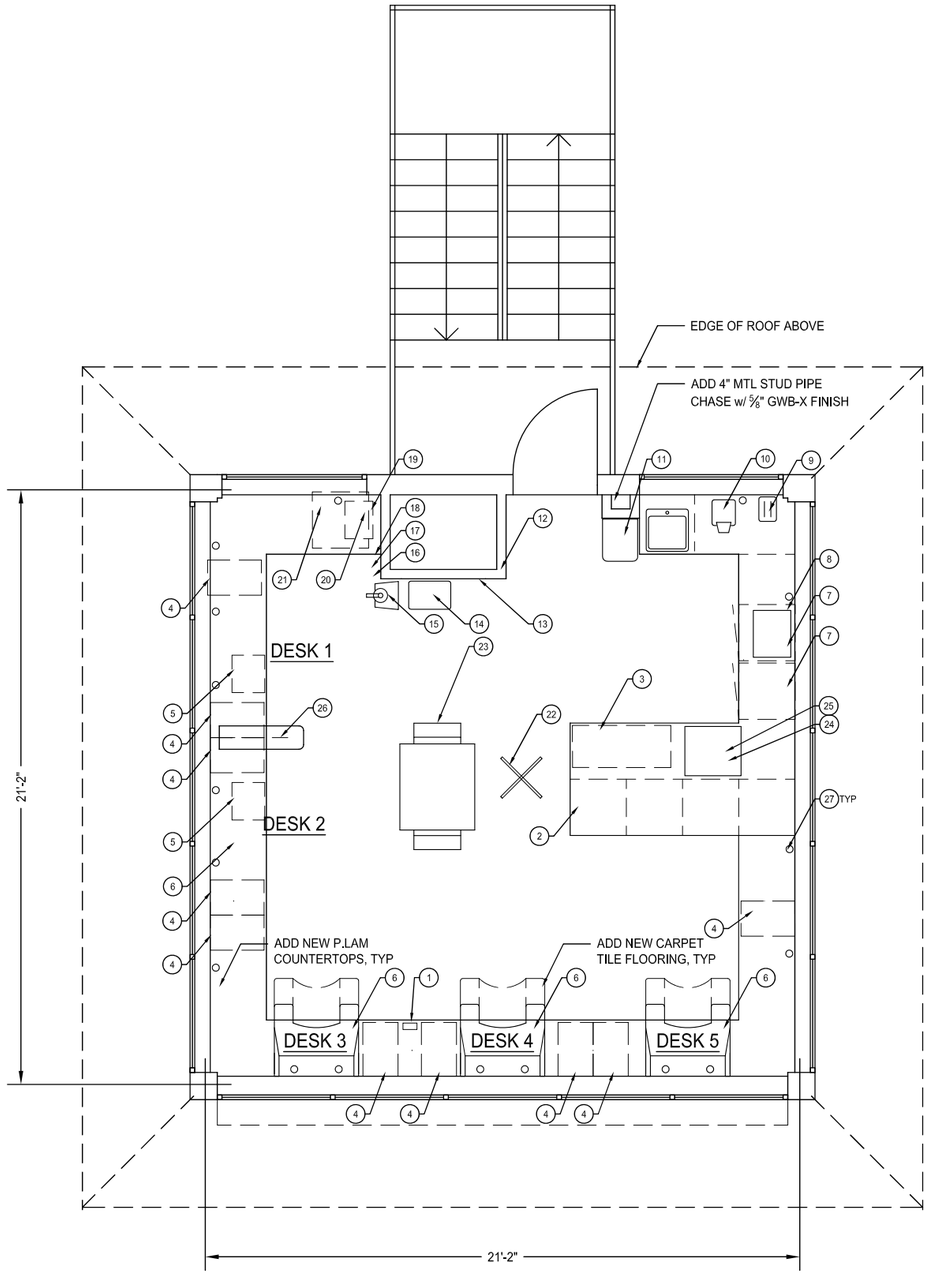
BINDING EDGE

DEMOLITION:

1. PROTECT EXISTING EQUIPMENT TO REMAIN
2. REMOVE & DISPOSE OF EXISTING CARPET, CABINETS, COUNTERTOPS & LIGHT FIXTURES.
3. BALLASTS & FLUORESCENT TUBES SHALL BE DISPOSED OF AT COUNTY HAZ-MAT FACILITIES
4. VERIFY ANY REQUIREMENTS WITH PORT REGARDING MATERIALS TO BE SALVAGED
5. PORT SHALL PROVIDE A REPORT TO BIDDERS IDENTIFYING ANY HAZARDOUS MATERIALS REQUIRING ABATEMENT

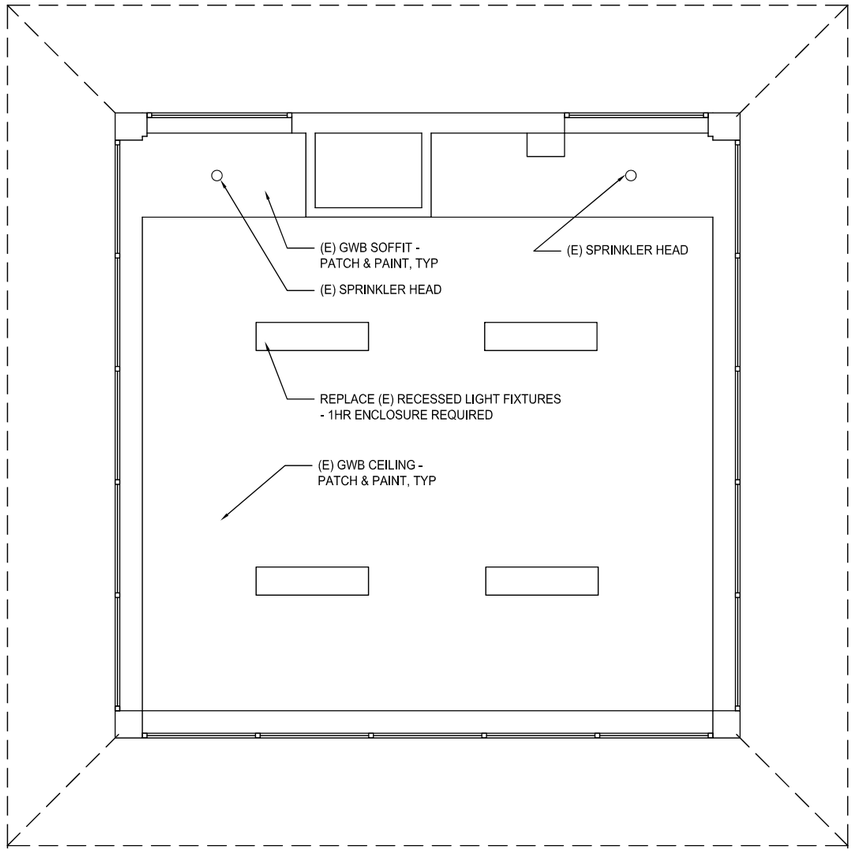
KEY NOTES: (1)

1. PROPOSED LOCATION FOR (E) RADIO/PHONE
2. 36" HT CABINET - P.LAM TOP (STORAGE UNDER)
3. 2 - DRAWER LATERAL FILE (42" x 19" x 28")
4. 3 - DRAWER FILE CABINET (15" x 23" x 27")
5. UNDERCOUNTER PENCIL DRAWER
6. ERGONOMIC STANDING COUNTERTOP DESK
7. UNDERCOUNTER REFRIGERATOR
8. (E) MICROWAVE (N.I.C.)
9. (E) TOASTER (N.I.C.)
10. (E) COFFEEMAKER (N.I.C.)
11. (E) BOTTLED WATER DISPENSER (N.I.C.)
12. PROPOSED NEW LOCATION OF (E) THERMOSTAT
13. (E) BULLETIN BOARD (RETAIN)
14. (E) TRASH CAN (N.I.C.)
15. (E) VACUUM CLEANER (N.I.C.)
16. (E) LOCATION OF THERMOSTAT TO BE RELOCATED
17. (E) LIGHT BUTTON/SWITCH
18. (E) RECESSED FIRE EXTINGUISHER CABINET
19. (E) WALL-MOUNTED EQUIPMENT TO REMAIN
20. (E) FIBEROPTIC C.I.U. & SHELF TO REMAIN
21. (E) I.D.F. EQUIPMENT UNDER COUNTERTOP (RETAIN)
22. (E) COAT TREE (N.I.C.)
23. (E) FLOOR PRINTER/COPIER (N.I.C.)
24. (E) COUNTERTOP PRINTER
25. PAPER STORAGE BELOW
26. CUSTOM SHELF UNIT
27. 3" DIAM PLASTIC WIRE MANAGEMENT SLEEVE



4th FLOOR PLAN

SCALE: 3/8" = 1'-0"



4th FLOOR REFLECTED CEILING PLAN

SCALE: 3/8" = 1'-0"

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STATE OF WASHINGTON
7006

#6581

SH # A1 OF #

CONT/CO #:	070781
M. ID:	201036.01
PHASE:	PERMITTING

NIM TOWER

FOURTH FLOOR RENOVATIONS

FLOOR PLANS

TOWNSHIP:	20
RANGE:	03
SECTION:	22
DAT-HRZ:	NAD83-SF
VERT:	MLLW 19.39' @ Tide 1933
PARCEL:	
DRAWING SCALE:	AS NOTED

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PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

PORT OF TACOMA FILE: P:\360780200-36078-17001-06\CAD\SheetFiles\A1 Floor Plans

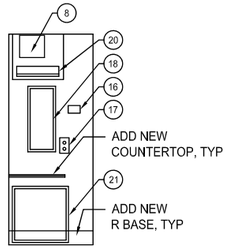
BINDING EDGE

ROOM FINISH SCHEDULE

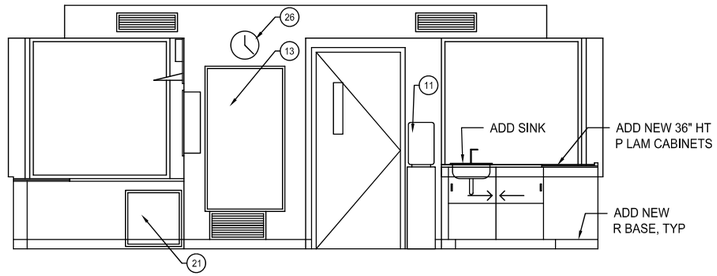
ROOM #	NAME	FLOOR		BASE	N. WALLS		S. WALLS		E. WALLS		W. WALLS		CEILING		NOTES
		MTL	FIN		MTL	FIN	MTL	FIN	MTL	FIN	MTL	FIN	MTL	FIN	
01	CONTROL	CONC	CAR	R	GWB	PNT	GWB	PNT	GWB	PNT	GWB	PNT	GWB	PNT	PATCH & REPAIR GWB AS NEEDED - PRIME ALL PATCHES PRIOR TO APPLICATION OF FINISH - REPLACE BASE @ ALL WALLS

ABBREVIATIONS

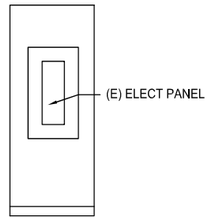
CAR	CARPET SQUARES
CONC	(E) CONCRETE
FIN	FINISH
FIN	FINISH
GWB	(E) GYPSUM WALLBOARD
PNT	PAINT
R	RUBBER



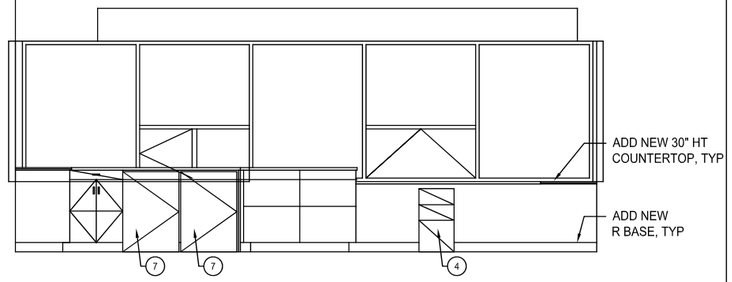
1 - E. ELEV
Scale: 3/8" = 1'-0"



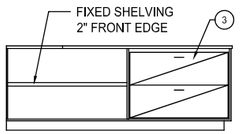
2 - N. ELEV
Scale: 3/8" = 1'-0"



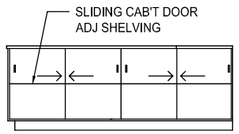
3 - W. ELEV
Scale: 3/8" = 1'-0"



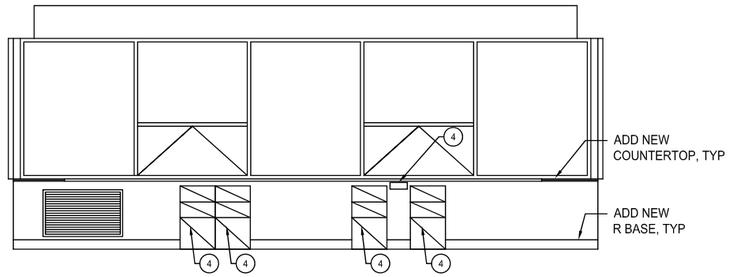
4 - E. ELEV
Scale: 3/8" = 1'-0"



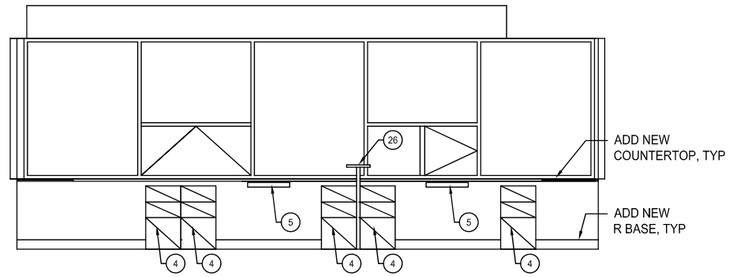
5 - S. PENINSULA CAB'T
Scale: 3/8" = 1'-0"



5 - N. PENINSULA CAB'T
Scale: 3/8" = 1'-0"



5 - S. ELEV
Scale: 3/8" = 1'-0"



6 - W. ELEV
Scale: 3/8" = 1'-0"

KEY NOTES: ①

1. PROPOSED LOCATION FOR (E) RADIO/PHONE
2. 36" HT CABINET - P.LAM TOP (STORAGE UNDER)
3. 2 - DRAWER LATERAL FILE (42" x 19" x 28")
4. 3 - DRAWER FILE CABINET (15" x 23" x 27")
5. UNDERCOUNTER PENCIL DRAWER
6. ERGONOMIC STANDING COUNTERTOP DESK
7. UNDERCOUNTER REFRIGERATOR
8. (E) MICROWAVE (N.I.C.)
9. (E) TOASTER (N.I.C.)
10. (E) COFFEEMAKER (N.I.C.)
11. (E) BOTTLED WATER DISPENSER (N.I.C.)
12. PROP(E)OSED NEW LOCATION OF (E) THERMOSTAT
13. (E) BULLETIN BOARD (RETAIN)
14. (E) TRASH CAN (N.I.C.)
15. (E) VACUUM CLEANER (N.I.C.)
16. (E) LOCATION OF THERMOSTAT TO BE RELOCATED
17. (E) LIGHT BUTTON/SWITCH
18. (E) RECESSED FIRE EXTINGUISHER CABINET
19. (E) WALL-MOUNTED EQUIPMENT TO REMAIN
20. (E) FIBEROPTIC C.I.U. & SHELF TO REMAIN
21. (E) I.D.F. EQUIPMENT UNDER COUNTERTOP (RETAIN)
22. (E) COAT TREE (N.I.C.)
23. (E) FLOOR PRINTER/COPIER (N.I.C.)
24. (E) COUNTERTOP PRINTER
25. PAPER STORAGE BELOW
26. CUSTOM SHELF UNIT

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STATE OF WASHINGTON
7006

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DIRECTOR ENG. DATE
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TOWNSHIP: 20 RANGE: 03 SECTION: 22 1933
VERT: MLLW 19.39' @ Tide
DAT-HRZ: WA83-SF
PARCEL: DRAWING SCALE: AS NOTED

NIM TOWER
FIFTH FLOOR RENOVATIONS
INTERIOR ELEVATIONS

SH # A2 OF #
#6581
CONT/CO NUS: 070781
M. ID: 201036.01
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BINDING EDGE

GENERAL LEGEND

- NORTH ARROW
- DETAIL, DRAWING REFERENCE (X / X)
- SECTION REFERENCE
- CONSTRUCTION NOTE (1)
- REVISION SYMBOL (A)
- POINT OF CONNECTION
- BOLD LINE WEIGHT INDICATES NEW WORK
- LIGHT LINE WEIGHT INDICATES EXISTING
- SLASHED LINE INDICATES EXISTING WORK TO BE DEMOLISHED

CODE INFORMATION:

2015 UNIFORM PLUMBING CODE (UPC)*
2015 WASHINGTON STATE ENERGY CODE COMMERCIAL PROVISIONS (WSEC)

* INCLUDING AMENDMENTS BY THE STATE OF WASHINGTON

PLUMBING LEGEND

- DOMESTIC COLD WATER (CW)
- DOMESTIC HOT WATER (HW)
- DOMESTIC HOT WATER CIRCULATING (HWC)
- SOIL, WASTE (S,W)
- VENT (V)
- PIPING IDENTIFIER, SEE ABBREVIATIONS (XX)
- ELBOW DOWN
- ELBOW UP
- TEE
- TEE DN
- TEE UP
- ANGLE VALVE
- BALL VALVE (NO), TYPE AS SPECIFIED
- BALL VALVE (NC), TYPE AS SPECIFIED
- BUTTERFLY VALVE, TYPE AS SPECIFIED
- BALANCING VALVE
- METERING BALANCING VALVE
- CHECK VALVE
- CONTROL VALVE
- 3-WAY CONTROL VALVE
- GATE VALVE (NO), TYPE AS SPECIFIED
- GATE VALVE (NC), TYPE AS SPECIFIED
- GLOBE VALVE (NO), TYPE AS SPECIFIED
- GLOBE VALVE (NC), TYPE AS SPECIFIED
- PLUG VALVE
- PRESSURE REDUCING VALVE
- SOLENOID VALVE
- REDUCED PRESSURE BACKFLOW PREVENTER
- ANGLE VALVE(PLAN VIEW)
- CAP
- BLIND FLANGE
- EXPANSION JOINT
- REDUCER
- PRESSURE GAUGE
- STRAINER
- UNION
- AIR VENT, TYPE AS SPECIFIED
- PRESSURE/TEMPERATURE TAP
- TEMPERATURE GAUGE

PLUMBING ABBREVIATIONS

AW	ACID WASTE
A	AIR, COMPRESSED AIR
BOP	BOTTOM OF PIPE
CI	CAST IRON
CF	CHEMICAL FEED
CIRC	CIRCULATING
CW	CITY WATER; DOMESTIC COLD WATER
CO	CLEAN OUT
CA	COMPRESSED AIR
DI	DEIONIZED WATER
DW	DISTILLED WATER
DOM	DOMESTIC
DR	DOOR; DRAIN
DF	DRINKING FOUNTAIN
ES	EMERGENCY SHOWER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FPHB	FREEZE PROOF HOSE BIBB
G	GAS
GPH	GALLONS PER HOUR
HB	HOSE BIBB
HW	DOMESTIC HOT WATER
HWC	DOMESTIC HOT WATER CIRCULATING
IPC	INTERNATIONAL PLUMBING CODE
IW	INDIRECT WASTE
JAN	JANITOR
L	LAVATORY
MV	MEDICAL VACUUM
NPW	NON-POTABLE WATER
NO	NITROUS OXIDE; NUMBER
N	NITROGEN
O	OXYGEN
PC	PUMPED CONDENSATE
PLBG	PLUMBING
PNEU	PNEUMATIC
PRV	PRESSURE REDUCING VALVE
RWL	RAIN WATER LEADER
RECIRC	RECIRCULATING
RD	ROOF DRAIN
S	SOIL
SS	SANITARY SEWER; SERVICE SINK; STAINLESS STEEL
SD	STORM DRAIN
UPC	UNIFORM PLUMBING CODE
V	VENT
VA	VALVE
VAC	VACUUM
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
W	WASTE; WATER; WIDE(DIM)
WC	WATER CLOSET
WFS	WATER FLOW SWITCH
Y	WYE

PLUMBING FIXTURE SCHEDULE

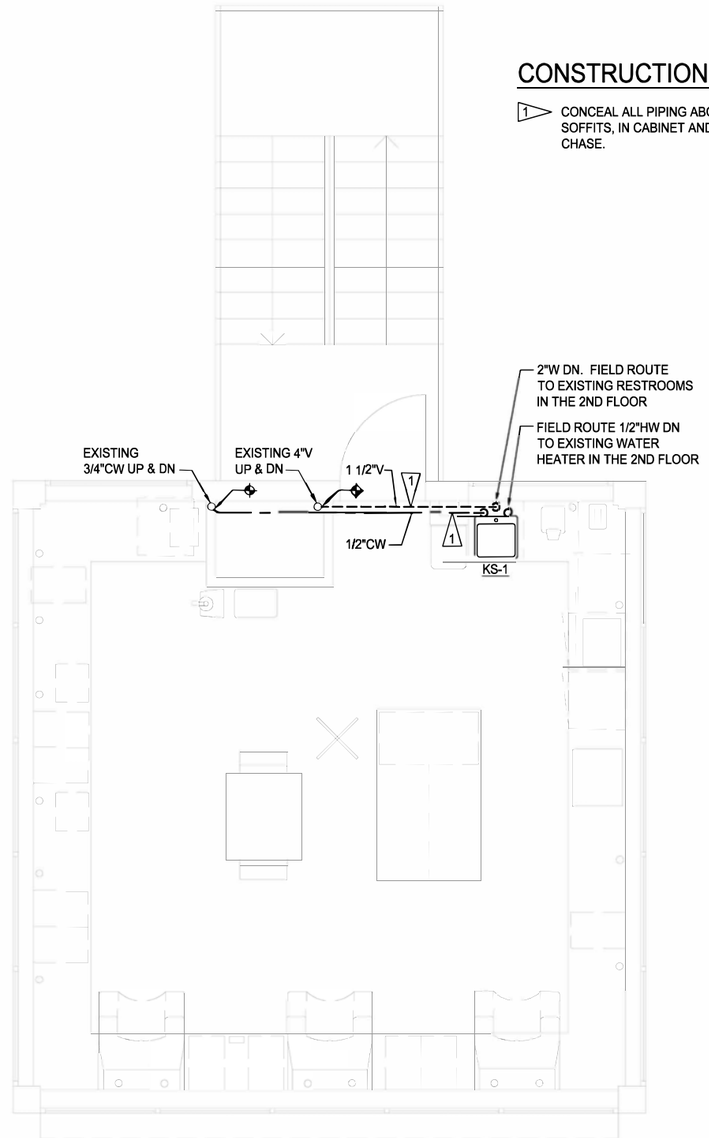
MARK	FIXTURE DESCRIPTION	BRANCH PIPE SIZE - INCHES DIA.				ADDITIONAL COMPONENTS	BASIS OF DESIGN		REMARKS
		COLD WATER	HOT WATER	WASTE	VENT		MANUFACTURER	MODEL	
KS-1	SINGLE COMPARTMENT KITCHEN SINK	1/2"	1/2"	2"	1 1/2"	FAUCET: ELKAY #LKGT1041 DRAIN: ELKAY #LK-99 (WITH REMOVABLE STRAINER BASKET)	ELKAY	#LR-2522	

GENERAL NOTES:

1. ALL PLUMBING PIPING SHALL BE INSULATED FOLLOWING 2015 WSEC REQUIREMENTS.

CONSTRUCTION NOTES:

1. CONCEAL ALL PIPING ABOVE EXISTING SOFFITS, IN CABINET AND MECHANICAL CHASE.



4TH FLOOR PLUMBING PLAN

SCALE: 3/8" = 1'-0"

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Seattle, Washington
Solutions & Service

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DRAWING SC. LE:	AS NOTED		

NIM TOWER
FOURTH FLOOR RENOVATIONS
4TH FLOOR PLUMBING PLAN

TOWNSHIP:		SECTION:	
RANGE:			
VERT:	MLLW 19.39' @ Tide	22	1933
DAT-HRZ:	WA83-SF		
PARCEL:			

#6581
M1
SH # OF #

CONT/CONS:	070781
M. ID:	201038.01
PHASE:	PERMITTING

BINDING EDGE

ABBREVIATION / DEFINITION

ABBREVIATION	DEFINITION
A, AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERES INTERUPTING CURRENT
AIL	AMBER INDICATING LIGHT
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BM	BEAM MIRROR
BP	BY-PASS CONTACTOR
BT	BEAM TRANSMITTER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CNTL	CONTROL
CO	CONDUIT ONLY
CONTD	CONTINUED
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DUCT BANK
DET	DETAIL
DIAG	DIAGRAM
DISC	DISCONNECT
DWG(S)	DRAWING(S)
EL, ELEV	ELEVATION
EMER	EMERGENCY
EQUIP	EQUIPMENT
ETM	ELAPSED TIME METER
FDR	FEEDER
GEN	GENERATOR
GFCI	GROUND-FAULT CIRCUIT INTERRUPTING
GFI	GROUND-FAULT INTERRUPTION
GFP	GROUND-FAULT PROTECTION
GIL	GREEN INDICATING LIGHT
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HAND HOLE
HOA	HAND-OFF-AUTO
HTR	HEATER
I/O	INPUT/OUTPUT
IC	ISOLATION CONTACTOR
IG	ISOLATED GROUND
INST	INSTANTANEOUS
INTLK	INTERLOCK
J	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILLS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES (APPARENT POWER)
KVAR	KILOVARS (REACTIVE POWER)
KW	KILOWATTS (REAL POWER)
KWH	KILOWATT HOUR
LS	LEVEL SWITCH
LSH	LEVEL SWITCH HIGH
LT	LEVEL TRANSMITTER
LTG	LIGHTING
mA	MILLIAMPERES
MAN	MANUAL
MCC	MOTOR CONTROL CENTER
MH	MAN HOLE
MTR,M	MOTOR
MTS	MANUAL TRANSFER SWITCH
mV	MILLIVOLTS
N.C.	NORMALLY CLOSED
NF	NON-FUSED
N.O.	NORMALLY OPEN
NO.	NUMBER
NP	NAMEPLATE
NTS	NOT TO SCALE
OL	OVERLOAD
P	PHOTOELECTRIC
PC	PHOTOELECTRIC CONTROL UNIT
PH. Ø	PHASE
PNL	PANEL
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
REF	REFERENCE
RECP	RECEPTACLE
R/F	RATE OF RISE/FIXED TEMPERATURE
RIL	RED INDICATING LIGHT
RTD	RESISTANCE TEMPERATURE DETECTOR

ABBREVIATION / DEFINITION

ABBREVIATION	DEFINITION
S, SEC	SECOND
SEL	SELECTOR
SPEC	SPECIFICATION
S.S.	STAINLESS STEEL
SW	SWITCH
SWGR	SWITCH GEAR
TB	TERMINAL BOX, TERMINAL BLOCK
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TYP	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
Vac or VAC	VOLTS ALTERNATING CURRENT
Vdc or VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
W/	WITH
W/O	WITHOUT
WIL	WHITE INDICATING LIGHT
WP	WEATHER PROOF (NEMA 4)
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
ZS	POSITION SWITCH

LIGHTING

- LINEAR FIXTURE, TYPE AS NOTED
- LINEAR WALL FIXTURE
- RECESSED TROFFER FIXTURE
- DISCRETE WALL FIXTURE
- RECESSED DOWNLIGHT
- ULTRASONIC OCCUPANCY SENSOR
- LIGHTING SWITCH
- 3-WAY SWITCH
- TWO 3-WAY SWITCHES
- FIXTURE TYPE IDENTIFICATION CALL-OUT AND SOURCE WATTAGE. REFER TO FIXTURE SCHEDULE FOR DETAILED REQUIREMENTS.

CONDUIT AND WIRING

- CONDUIT IN SLAB OR BELOW GRADE
- CONDUIT EXPOSED
- GROUNDING CONDUCTOR 30" BELOW GRADE
- CONDUIT BENDS TOWARD OBSERVER
- CONDUIT BENDS AWAY FROM OBSERVER
- CONDUIT STUB
- PHASE / SWITCHLEG CONDUCTOR
- HOMERUN / CONDUIT
- GROUND CONDUCTOR
- NEUTRAL CONDUCTOR
- PANEL AND CIRCUIT (EXAMPLE: PANEL 2L1, CIRCUITS 1 AND 3)
- JUNCTION BOX

POWER

- MOTOR CONNECTION
- EQUIPMENT CONNECTION
- RECEPTACLE - DUPLEX
- GFCI — RECEPTACLE - GFCI TYPE
- WP/GFCI — RECEPTACLE - GFCI TYPE WITH WEATHER-PROOF IN-USE COVER
- DEVICE CONNECTION
- RECEPTACLE - SPECIAL
- THERMOSTAT
- DISCONNECT SWITCH
- DISCONNECT SWITCH "F" INDICATES FUSED, SEE PLANS FOR RATING
- COMBINATION STARTER AND DISCONNECT SWITCH
- BRANCH PANELBOARD 120/240V
- 120VAC CLOCK HANGER OUTLET
- UTILITY WATT-HOUR REVENUE METER

GENERAL ANNOTATIONS

- KEY NOTES
- HTR-1 — CALLOUT - EQUIPMENT

GENERAL WORK DEFINITIONS

- LIGHT LINE INDICATED EXISTING ELECTRICAL OR EXISTING EQUIPMENT. LIGHT LINE MAY ALSO BE USED FOR DETAIL DRAWING CLARITY.
- HEAVY LINE INDICATES NEW WORK
- EXISTING WORK TO BE REMOVED
- (R) — EXISTING WORK TO BE RELOCATED

SIGNAL AND COMMUNICATIONS

- TB — TERMINAL BOX
- JACK - VOICE / DATA
- JACK - DATA OR OUTLET BOX ONLY
- JACK - VOICE

SITE

- OE — OVERHEAD ELECTRICAL
- HH — ELECTRICAL HAND-HOLE
- PP — UTILITY POWER POLE

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4-13-18

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PRINTED BY:	john.rice Apr 13, 2018		
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TOWNSHIP:	RANGE:	SECTION:
DAT-HRZ:	WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933
PARCEL:		DRAWING SCALE: AS NOTED

NIM TOWER
FOURTH FLOOR RENOVATIONS
ELECTRICAL SYMBOLS

#6581
E1
SH # OF #

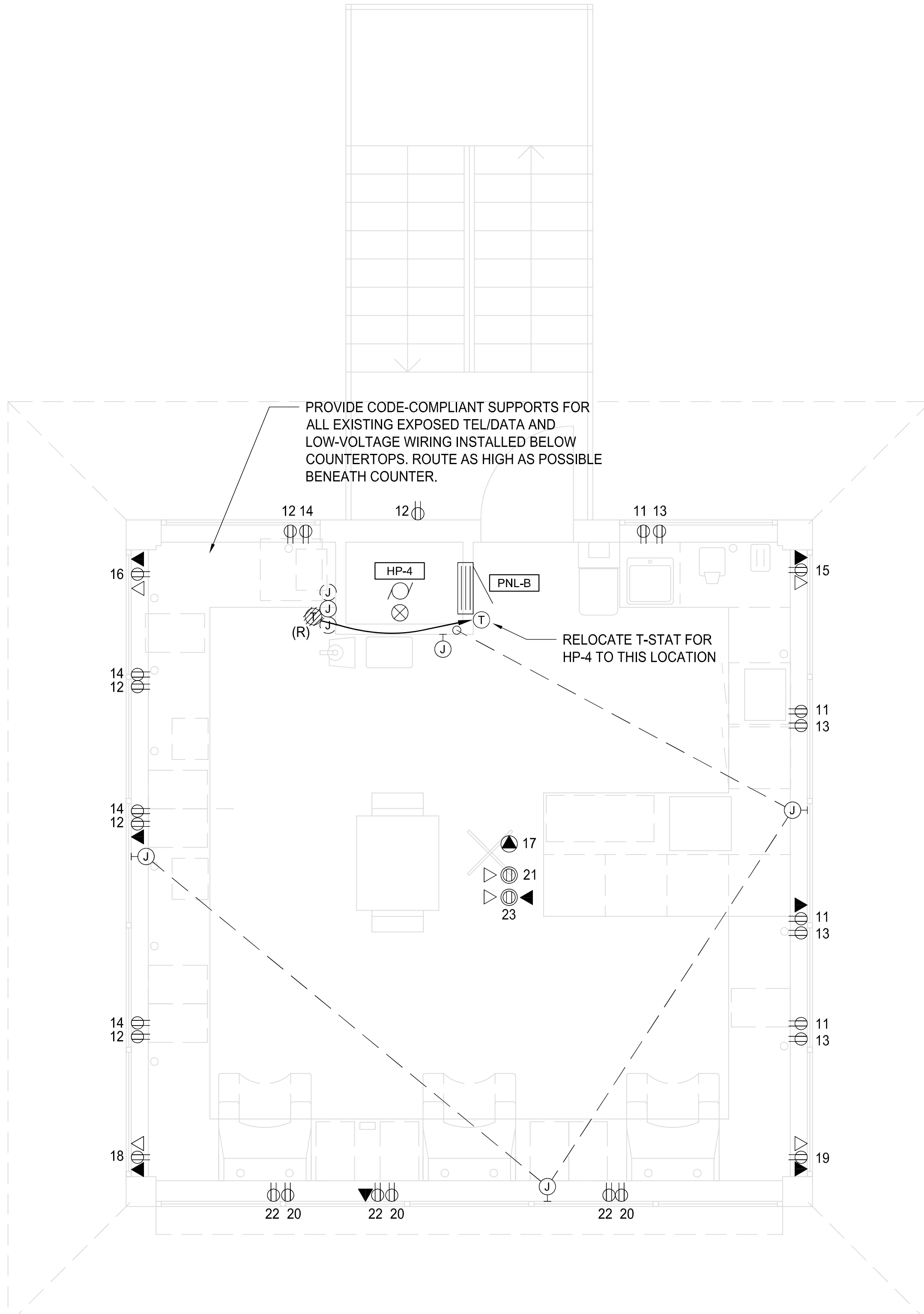
CONT/CONE:	070781
M ID:	201036.01
PHASE:	PERMITTING

PORT OF TACOMA FILE: P:\36078\200-36078-17001-06\CAD\SheetFiles\E1 Electrical Symbols

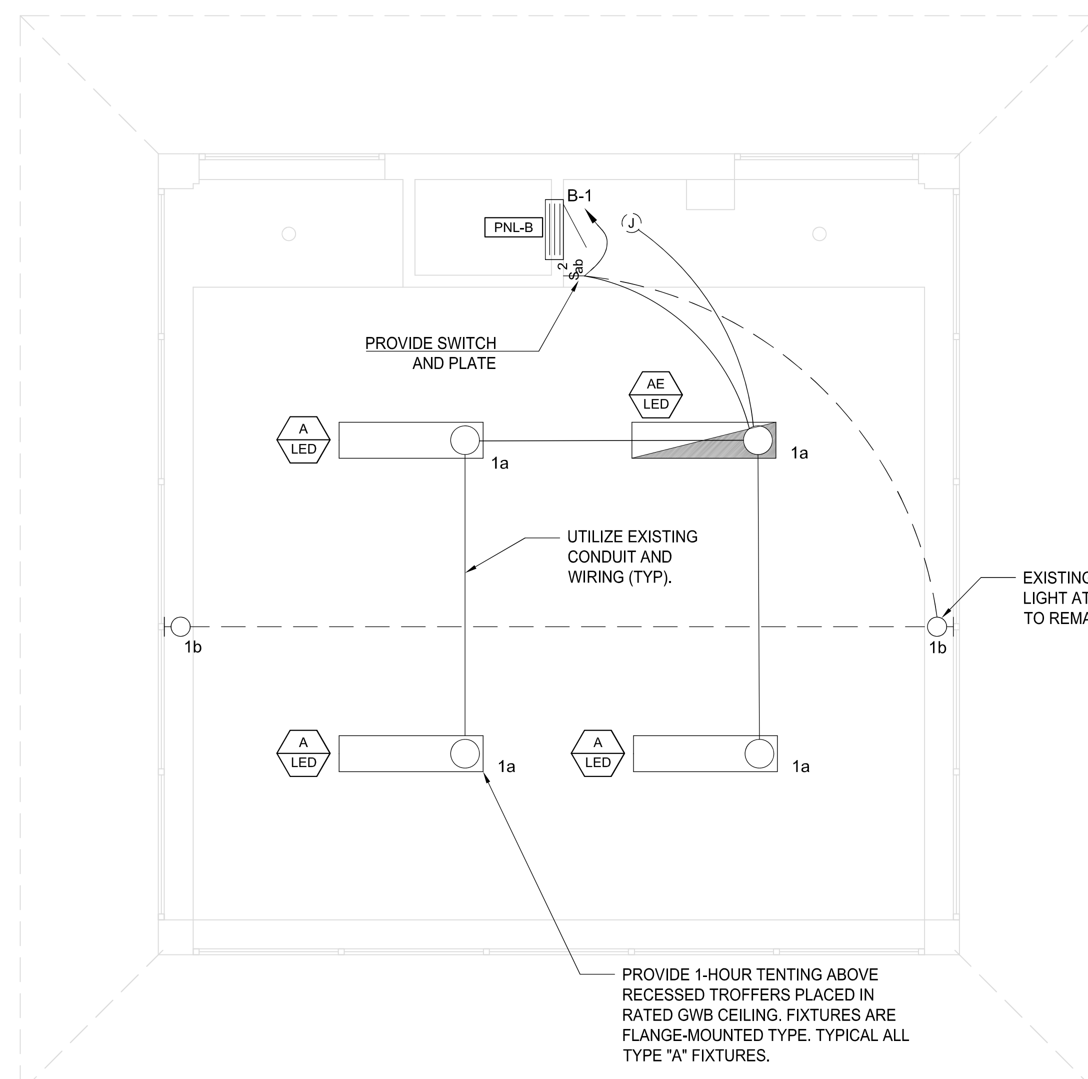
ENERGY CODE COMPLIANCE WAC 51-11

SECTION 405.4 - LIGHTING POWER DENSITY
ALLOWANCE 0.78W/SQ-FT OPEN OFFICE X 473 SQ-FT = 369W ALLOWED
PROPOSED LIGHTING SYSTEM = (4) X 51W (TYPE 'A') + (2) NIGHT LIGHTS X 25W/EA
PROPOSED LIGHTING LOAD = 254W

WAC 51-11 ALTERATION EXCEPTION USED FOR CONTROLS. EXISTING WIRING TO REMAIN.



4th FLOOR PLAN - POWER & COMM
SCALE: 3/8" = 1'-0"



4th FLOOR LIGHTING PLAN
SCALE: 3/8" = 1'-0"

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NIM TOWER
FOURTH FLOOR RENOVATIONS
ELECTRICAL PLANS

TOWNSHIP: | RANGE: | SECTION:
DAT-HRZ: WA83-SF | VERT: MLLW 19.39' @ Tide 22 1933
PARCEL: | DRAWING SCALE: AS NOTED

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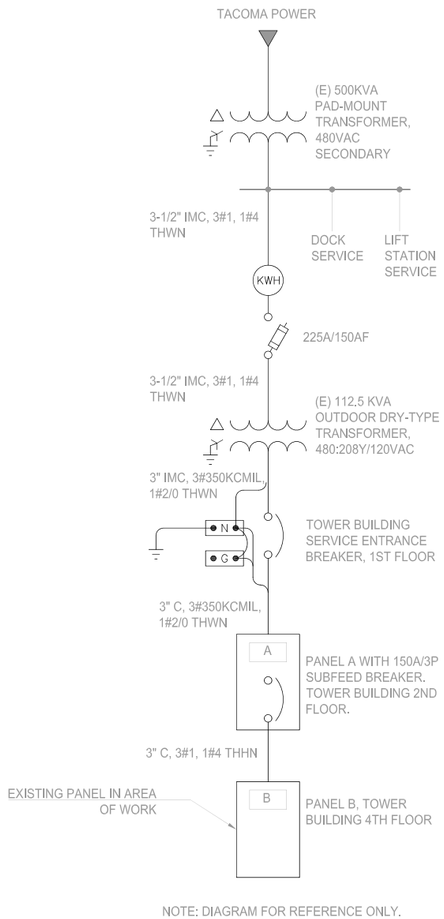

NOTE: DIAGRAM FOR REFERENCE ONLY.

ONE-LINE DISTRIBUTION DIAGRAM

SCALE: NONE

LUMINAIRE SCHEDULE

ID	DESCRIPTION	LAMPS	MOUNTING	WATTS	VOLTAGE	BASIS OF DESIGN FIXTURE
A	12" X 48" SEMI-DIRECT STYLE RECESSED STATIC TROFFER WITH WHITE FLANGED TRIM AND DROP-CURVED FIXTURE DIFFUSER WITH WHITE PERFORATED METAL FINISH.	5000-LUM LED, 3500K, 80+ CRI	RECESSED GWB FLANGE	51W	120VAC	HE WILLIAMS AT1-14-L50/835-P SERIES, WITH FACTORY INSTALLED FLANGE OPTION, OR APPROVED EQUAL.

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4-13-18

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DIRECTOR ENG.	DATE	PROJ. ENGR	DATE
PRINTED BY:	john.rice Apr 13, 2018	CHECKED BY	
PORT ADDRESS:	ONE SITCUM PLAZA TACOMA, WA 98401-1837		

NIM TOWER

FOURTH FLOOR RENOVATIONS

ELECTRICAL ONE-LINE & SCHEDULES

TOWNSHIP:	WA83-SF	RANGE:	SECTION:
DAT-HRZ:	WA83-SF	VERT: MLLW 19.39' @ Tide 22 1933	DRAWING SCALE: AS NOTED
PARCEL:			

#6581

E3

SH # OF #

CONT/CONS:	070781
M. ID:	201036.01
PHASE:	PERMITTING