

OREGON UNIVERSITY SYSTEM

NOTICE OF PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY

THIS OPPORTUNITY IS ONLY AVAILABLE TO CONTRACTORS WITH A CURRENT OREGON UNIVERSITY SYSTEM (OUS) RETAINER CONTRACT FOR CONSTRUCTION RELATED SERVICES.

The State Board of Higher Education acting by and through Portland State University (“Owner”) is accepting sealed bids for a public improvement project at the Office of Facilities and Property Management, 617 SW Montgomery Street, Suite 202, Portland, Oregon until **2:00 PM**, Pacific Time, **March 7, 2013** (“Closing Date and Time”) for the **UCB 4th Floor Abatement ITB** project located at 527 SW Hall Street, Portland, Oregon (“Project”).

Scope: HEPA-vac and remove ceiling tiles five (5) feet on center of structural beams #3, #4, and #5 of the University Center Building fourth floor. The approximate square foot area of each structural beam is 1,100 square feet for a total of 3,300 square feet. Remove all fireproofing overspray on fixtures, structural elements (excludes structural beam) and ductwork and encapsulate in same areas. Provide air monitoring through an Oregon DEQ approved analytical laboratory. Monitoring to include OWA samples, negative air exhaust airflow, and all clearances. Furnish DEQ permit. The work associated with the 4th floor will need to be done on weekends between 5:00 PM on Friday and 7:00 AM on Monday. These spaces will need to be fully operational between 8:00 AM – 5:00 PM, Monday - Friday. No tenants will be relocated during the construction period. During construction the contractor will need to protect all office furniture, computers, supplies, etc.

A **mandatory pre-bid conference examination of the site and conditions** will be conducted at 3:30 PM local time, **February 28, 2013**. Bidders shall meet with Owner’s Representative at Portland State University, Office of Facilities and Property Management, 617 SW Montgomery Street, Suite 202, Portland, Oregon for that purpose. Attendance will be documented through a sign-in sheet prepared by the OUS representative. Prime bidders who arrive more than 5 minutes after start of time of the meeting (as stated in the solicitation and by the OUS representative’s watch) or after the discussion portion of the meeting (whichever comes first) shall not be permitted to sign in and will not be permitted to submit a bid on the project.

Bids will be opened and publicly read aloud on **March 7, 2013 at 2:00 PM**, at the Office of Facilities and Property Management, 617 SW Montgomery Street, Suite 202, Portland, Oregon by the Owner’s representative or designee.

Bids will be received on a lump-sum basis for all of the work.

All bidders must comply with requirements of the prevailing wage law in ORS 279C.800 through ORS 279C.870. All bidders must be registered with the Construction Contractor’s Board at the time of bid submission. No bid will be considered unless fully completed in the manner provided in the “Instructions to Bidders” upon the Bid Form provided and accompanied by Bid Security. OUS encourages bids from Minority, Women, and Emerging Small Businesses.

The project schedule is identified below; if there are any changes to the dates, they shall be noted in a subsequent Addendum.

Bid documents on OUS Website	February 22, 2013
Mandatory conference & pre-bid walk-through	February 28, 2013, 3:30 PM local time
Applicant Questions/Substitution requests/Solicitation	
Protests Due	March 4, 2013, 5:00 PM local time
Addendum Issued, if required	March 5, 2013
Bids Due	March 7, 2013, 2:00 PM local time
Substantial Completion	April 30, 2013
Final Completion	May 31, 2013

The following dates are tentative and subject to change:

Notice of Intent to Award	March 7, 2013
End of Protest Period	March 12, 2013, 5:00 PM local time
Notice to Proceed	March 13, 2013

Owner reserves the right to accept or reject any or all Bids received in response to the ITB, to request either wholly or in part new Bids, or to negotiate with any Bidder considered qualified in any manner deemed to be in the best interest of Owner.

RESPONSE DATE

To be considered for selection, Bids must arrive at Portland State University's Facilities and Property Management office by 2:00 PM local time, **March 7, 2013**. Faxed and/or e-mailed bids will not be accepted. Applicants who mail packages should allow ample delivery time to ensure timely arrival. The address of the Facilities and Property Management Office is:

FOR DELIVERY:	FOR MAIL: (<u>Not Recommended</u>)
Contracts Staff	PSU Facilities and Property Management
PSU Facilities and Property Management	PO Box 751
617 SW Montgomery, Room 202	Mail Stop FAP
Portland OR 97201	Portland OR 97207-0751

EQUAL EMPLOYMENT COMPLIANCE REQUIREMENT; SEXUAL HARASSMENT

By submitting a Bid, the Bidder certifies conformance to the applicable federal, state and local laws, acts, executive orders, statutes, administrative rules, regulations, ordinance and related court rulings concerning Affirmative Action toward Equal Employment Opportunities. All information and reports required by the Federal or Oregon State or local Governments, having responsibility for the enforcement of the foregoing, shall be supplied to the Owner upon request for purposes of investigation to ascertain compliance with the foregoing.

The Owner is committed to increasing opportunities for Emerging Small Businesses and Minority and Women Owned Businesses, and Owner strongly encourages its contractors to use these businesses in providing services and materials for Owner contracts and projects.

Pursuant to OAR 580-061-0030, by submitting a proposal, the bidder certifies that the bidder has not discriminated against Minority, Women or Emerging Small Business Enterprises in obtaining any required subcontracts.

Pursuant to OAR-061-0040, bidders are hereby notified that the OSBHE has adopted policies applicable to consultants and contractors that prohibit sexual harassment and that bidder and their employees are required to adhere to Owner's policy prohibiting sexual harassment in their interactions with members of Owner's community.

PROTESTS

1. Solicitation Protests:

Prospective Bidders may submit questions, requests for clarification or change or protests of particular solicitation provisions and specifications and conditions (including comments on any specifications that a firm believes limits competition) in writing to Portland State University Construction Contracts Staff via email fapcontracts@pdx.edu by delivery or mail to 617 SW Montgomery, Suite 202, Portland, OR 97201. These must be received no later than 5:00 PM local time on **March 4, 2013**. Such requests for clarification or change or protests must include the reasons for the request or protest and any proposed changes to the solicitation provisions and specifications and conditions.

Questions and requests for clarification or change that are timely received will be answered via addenda. Protests will be answered directly with the protesting bidder. Any changes arising from questions, requests for clarification or change or protests will be made only via addenda to the ITB. Responses from Owner not contained in an official addendum to the solicitation will not be binding on Owner. Bidders are encouraged to check on the status of all addenda prior to submission of their proposals.

2. Selection Protest:

Any Bidder who responds to this solicitation and claims to have been adversely affected or aggrieved by the selection of competing Bidders may submit a written protest to:

Construction Contracts Department
Portland State University, Facilities and Property Management
617 SW Montgomery, Suite 202
Portland, OR 97201

The written protest must be received by 5:00 PM local time on March 12, 2013.

Protests will be answered directly to the protesting Bidder. Selection protests must comply with and will be addressed pursuant to OAR 580-061-0145.

ADDENDA

Although Owner encourages an open bid process, prospective bidders need to be aware that the solicitation will be modified only by documents issued as addenda by Owner. No other direction or comments received by bidders, written or oral, will serve to change the solicitation document.

OREGON STATE BOARD OF HIGHER EDUCATION

By: PORTLAND STATE UNIVERSITY
ROBYN K. PIERCE, DIRECTOR, FACILITIES & PROPERTY MANAGEMENT

OREGON UNIVERSITY SYSTEM
STANDARD RETAINER CONTRACT
INSTRUCTIONS TO BIDDERS

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INSTRUCTIONS TO BIDDERS

Oregon Administrative Rules (“OAR”) Chapter 580, Divisions 61 and 63 govern this OUS procurement process.

Article 1. Definitions

1.1. Capitalized words used herein but not defined shall have the meaning set forth in the OUS Retainer General Conditions and OAR 580-061-0010. The following terms used herein shall have the meaning set forth below:

“**Bid Form**”- refers to OUS Contract Form B-5 provided by Owner to be completed by Bidder.

“**Project Manual**”- The Project Manual includes, but is not necessarily limited to the following: the Advertisement for Bids or Notice of Contracting Opportunity, these Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Bid Bond, OUS Retainer Contract General Conditions, Supplemental General Conditions (if any), Sample Retainer Contract Supplement, Performance Bond, Payment Bond, and the Plans and Specifications.

Article 2. Scope of Work

2.1 The Work contemplated in this document shall be for the Owner in connection with the Project described in the Project Manual.

Article 3. Examination of Site and Conditions

3.1 Before making a Bid, the Bidder shall examine the Work site to ascertain its physical condition. The Bidder shall be responsible for being fully informed as to the quality, quantity and sources of supply of the materials listed on the Project Manual. Failure to comply with this Section will not release Contractor from entering into the Contract nor excuse Contractor from performing the Work in strict accordance with the terms of the Contract Documents.

3.2 The Owner will not be responsible for any loss or unanticipated costs which may arise as a result of Contractor's failure to be fully informed in advance with regard to all conditions pertaining to the Work and the character of the Work required.

3.3. No statement made by any officer, agent, or employee of the Owner in relation to the physical conditions pertaining to the Work site or quality, quantity, and supply of materials will be binding on the Owner, unless included in writing in the Project Manual or an Addendum.

Article 4. Substitute Materials Approval Process

4.1 Prior to submitting a Bid including a Substitution, the Bidder must first seek approval of the Substitution from the Architect (or Engineer, as appropriate hereafter) by submitting a written request for approval at least [10] calendar days prior to the Closing Date and Time. The Bidder submitting the request shall be responsible for its timely delivery.

4.2 Substitution approval requests shall be accompanied by samples, records of performance, certified copies of tests by impartial and recognized laboratories and such other information as the Architect may request.

4.3 Within a reasonable time after receiving such a request the Owner (or Architect if so designated) will consider whether the Substitution sought by Bidder is of equal value, utility, as the designated product in the Project Manual. If the requested Substitution is approved an Addendum to the Project Manual shall be issued. A copy of each

Addendum will be posted on the OUS Bid and Business Opportunities website (<http://secure.ous.edu/bid>) and shall become a part of the Project Manual.

4.4 When the Architect approves a Substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

Article 5. Interpretation of Project Manual

5.1 A Bidder in doubt as to the meaning of any part of the Project Manual may submit a written request for an interpretation to the Architect at any time prior to [10] calendar days prior to the Closing Date and Time.

5.2 Any interpretation of the Project Manual will be made only by a duly issued Addendum. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item.

5.3 To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer named, brand or item designation given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether they do so or not.

Article 6. Execution of the Bid Form

6.1 The Bid Form relates to Bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished by the Owner will be considered as the Bid. Each Bidder shall Bid upon the Work exactly as set forth in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Project Manual. Bids that fail to address alternates set forth on the Bid Form may be considered non-responsive.

6.2 Each Bid Form must: 1) Be completed in accordance with these instructions; 2) Include the appropriate signatures as noted on the Bid Form; 3) Include numbers pertaining to base Bids stated both in writing and in figures; and 4) Include the Bidder's typed or clearly printed address.

6.3 When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates are shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

Article 7. Prohibition of Alterations to Bid

7.1 Bids which are incomplete, or contain ambiguities or conditions not provided for in the Bid Form, may be rejected.

Article 8. Submission of Bid

8.1 Each Bid shall be sealed in an envelope, properly addressed to the appropriate project representative of the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Advertisement for Bids.

Article 9. Bid Closing and Opening of Bids

9.1 All Bids must be received by the Owner before the Closing Date and Time. Any Bids received after the Closing Date and Time will be rejected and returned to the Bidder unopened.

9.2 At the time of opening and reading of Bids, each Bid received, irrespective of any irregularities or informalities will be publicly opened and read aloud.

Article 10. Acceptance or Rejection of Bids by Owner

10.1 Unless all Bids are rejected, the Owner will award the Contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the Contract, the Contract will be awarded to the next lowest responsible Bidder or Bidders in succession.

10.2 The procedures for Contract awards shall be in compliance with the provisions of OARs adopted by the Owner.

10.3 The Owner reserves the right to reject all Bids and to waive minor informalities.

10.4 The Owner reserves the right to hold the Bid and any required Bid security, of the three lowest Bidders for a period of 30 calendar days from the time of Bid opening pending award of the Contract. Following award of the Contract, any Bid security furnished by the three lowest Bidders may be held 20 calendar days pending execution of the Contract. All other Bids will be rejected and Bid security returned.

10.5 In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

10.6 If Owner has not accepted a Bid within 30 calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted and request the return of any Bid security then held.

Article 11. Withdrawal of Bid

11.1 At any time prior to the Closing Date and Time a Bidder may withdraw its Bid. This will not preclude the submission of another Bid by such Bidder prior to the Closing Date and Time.

11.2 After the Closing Date and Time, no Bidder will be permitted to withdraw its Bid within the time period specified in Article 10 for award and execution, except as provided for in that Article.

Article 12. Execution of Contract, Agreement, Performance Bond and Payment Bond

12.1 The Owner will provide the successful Bidder with Contract Documents within 10 calendar days after the award of the Contract. The Bidder shall be required to execute the Contract as provided, including a Performance Bond and a Payment Bond from a surety company licensed to do surety business in the State of Oregon, within 20 calendar days after the award of the Contract. The Contract Documents shall be delivered to the Owner in the manner stated in the Notice of Award.

Article 13. Recyclable Products

13.1 Contractors must use recyclable products to the maximum extent economically feasible in the performance of the Contract.

Article 14. Security to Be Furnished by Each Bidder

14.1 Each Bid must be accompanied by either: 1) a cashier's check or a certified check drawn on a bank authorized to do business in the State of Oregon, or 2) a Bid Bond described hereinafter, executed in favor of Owner, for an amount equal to 10 percent of the total Bid amount as a guarantee that if awarded the contract the Bidder will execute the contract and give a Performance Bond and Payment Bond as required.

14.2 The Contractor's check or Bid Bond will be retained until the Contractor has entered into a Contract and furnished a 100 percent Performance Bond and 100 percent Payment Bond.

14.3 The Owner reserves the right to hold the Bid security as described in Article 10. Should the successful Bidder fail to execute and deliver the Contract as provided for in Article 12, including a satisfactory performance bond and payment bond within 20 calendar days after the Bid has been accepted by the Owner, then the Contract award may be canceled and the Bid security may be forfeited as liquidated damages, at the option of the Owner. The date of the acceptance of the Bid and the award of the contract as contemplated by the Project Manual shall mean the date of acceptance specified in the Notice of Award.

Article 15. Execution of Bid Bond

15.1 Should the Bidder elect to utilize a Bid Bond as described in Article 14 in order to satisfy the Bid security requirements, such form must be completed in the following manner:

15.1.1 Bid Bonds must be executed on OUS forms, which will be provided to all prospective Bidders by the Owner.

15.1.2 The Bid Bond shall be executed on behalf of a bonding company licensed to do business in the State of Oregon.

15.1.3 In the case of a sole individual, the Bid Bond need only be executed as principal by the sole individual. In the case of a partnership, the Bid Bond must be executed by at least one of the partners. In the case of a corporation, the Bid Bond must be executed by stating the official name of the corporation under which is placed the signature of an officer authorized to sign on behalf of the corporation followed by such person's official capacity, such as president, etc. This signature shall be attested by the secretary or assistant secretary of the corporation. The corporation seal should then be affixed to the Bid Bond. In the case of a limited liability company/corporation ("LLC"), the Bid Bond must be executed by stating the official name of the LLC under which is placed the signature of a member authorized to sign on behalf of the LLC.

15.1.4 The name of the surety must be stated in the execution over the signature of its duly authorized attorney-in-fact and accompanied by the seal of the surety corporation.

OREGON UNIVERSITY SYSTEM
STANDARD PUBLIC IMPROVEMENT CONTRACT
SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

The following modifies the Oregon University System "Instructions to Bidders" for this procurement. Where a portion of the Instructions to Bidders has been modified by these Supplemental Instructions to Bidders, the unaltered portions shall remain in effect.

The following Articles are to be removed in their entirety and replaced with:

Article 1. Scope of Work

The work contemplated under this contract with the Oregon State Board of Higher Education, hereinafter referred to as the Owner, includes all labor, materials, transportation, equipment and services necessary for, and reasonably incidental to, the completion of all construction work in connection with the project described in the Project Manual which includes, but is not necessarily limited to, the Advertisement for Bids, Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Public Improvement Agreement Form, OUS General Conditions, Supplemental General Conditions, Plans and Specifications.

Article 4. RESERVED

Article 5. RESERVED

Article 6. Execution of the Bid Form

Each bid shall be made in accordance with the sample Bid Form accompanying these instructions; the appropriate signatures for a sole individual, partnership, corporation or limited liability corporation shall be added as noted in Article 5C above; numbers pertaining to base bids shall be stated both in writing and in figures; the bidder's address shall be typed or printed.

The Bid Form relates to bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished will be considered as the bid. Each bidder shall bid upon the work exactly as specified and provided in the Bid Form. The bidder shall include in the bid a sum to cover the cost of all items contemplated by the Contract. The bidder shall bid upon all alternates that may be indicated on the Bid Form. When bidding on an alternate for which there is no charge, the bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates is shown on the Bid Form, the bidder shall indicate whether each is "add" or "deduct."

The Bid Form included in the Project Manual is a sample. One additional copy of the Bid Form may be furnished with the Project Manual. Only one copy needs to be submitted with the bid.

Article 12. Execution of Agreement

The Owner will provide the successful bidder with contract forms within 10 calendar days after the award of the Contract. The bidder is required to execute the contract forms as provided, within 20 calendar days after the award of the contract. The contract forms shall be delivered to the Owner in the number called for and to the location as noted in the Notice of Award

OREGON UNIVERSITY SYSTEM
STANDARD RETAINER CONTRACT
BID FORM

OUS CAMPUS: Portland State University

PROJECT: UCB 4th Floor Abatement ITB

BID CLOSING: March 7, 2013, 2:00 PM local time

BID OPENING: March 7, 2013, 2:00 PM local time

FROM: _____
Name of Contractor

TO: The Oregon State Board of Higher Education, acting by and through
Portland State University
617 SW Montgomery Street, Suite 202
Portland, OR 97201

1. The Undersigned (*check one of the following and insert information as requested*):

___ a. An individual doing business under an assumed name registered under the laws of the State of _____; or

___ b. A partnership registered under the laws of the State of _____; or

___ c. A corporation organized under the laws of the State of _____; or

___ d. A limited liability corporation/company organized under the laws of the State of _____;

hereby proposes to furnish all material and labor and perform all Work hereinafter indicated for the above project in strict accordance with the Contract Documents for the Basic Bid as follows:

_____ Dollars (\$_____)

and the Undersigned agrees to be bound by each of the following documents:

- Advertisement for Bids or Notice of Retainer Contract Opportunity
- Instructions to Bidders
- Supplemental Instructions to Bidders, if any
- OUS Retainer Contract General Conditions
- Supplemental OUS Retainer Contract General Conditions, if any
- Sample Retainer Contract Supplement
- Plans and Specifications
- Drawings and Details
- Prevailing Wage Rates
- Payroll and Certified Statement Form
- Any ADDENDA numbered ___ through ___, inclusive (*fill in blanks*).

2. RESERVED

3. RESERVED

4. The substantial completion date shall be **April 30, 2013**. The final completion date shall be **May 31, 2013**.

5. The Undersigned certifies that: (1) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (2) The contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned or its surety on any Bond furnished with the Bid and will not be communicated to such person prior to the official opening of the Bid.

6. The undersigned **HAS, HAS NOT** (*circle applicable status*) paid unemployment or income taxes in Oregon within the past 12 months and **HAS, HAS NOT** (*circle applicable status*) a business address in Oregon.

7. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

8. Contractor's CCB registration number is _____. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will render the bid unresponsive and it will be rejected, unless contrary to federal law.

9. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the Contract.

10. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is _____, Policy No. _____, and that Contractor shall submit Certificates of Insurance as required.

11. Contractor's Project Manager for this project is: _____,
Office Phone: _____ Cell Phone: _____.

12. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

13. Accompanying herewith is Bid Security which is equal to ten (10) percent of the total amount of the Basic Bid.

14. RESERVED

15. RESERVED

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM _____

ADDRESS _____

FEDERAL TAX ID _____

TELEPHONE NO _____

FAX NO _____

SIGNATURE 1) _____

Sole Individual

or 2) _____

Partner

or 3) _____

Authorized Officer of Corporation

(SEAL)

Attested: Secretary of Corporation

*Payment information will be reported to the IRS under the name and taxpayer ID # provided above.
Information not matching IRS records could subject Contractor to 31 percent backup withholding.*

******* END OF BID *******

**RETAINER CONTRACT SUPPLEMENT
OUS RETAINER CONTRACT FOR CONSTRUCTION
RELATED SERVICES**

Supplement No. _____
Project Name **UCB 4th Floor Abatement ITB**
Owner's Project Manager _____

This Retainer Contract Supplement dated _____ (the "Supplement") is entered into between:

"Contractor": _____

Federal Tax ID No. _____

and "Owner": The State Board of Higher Education, acting by and through:
Portland State University
Facilities and Property Management
617 SW Montgomery Street, Suite 202
Portland, OR 97207

(collectively, the "Parties") pursuant to the Retainer Contract for Construction Related Services between the Parties terminating _____ (the "Retainer Contract"). Capitalized terms have the meaning defined in the OUS Retainer General Conditions unless otherwise defined in the Retainer Contract or herein.

1. DESCRIPTION OF THE PROJECT. The project to which this Supplement pertains is described as follows: _____ (the "Project").

2. WORK TO BE PERFORMED. Contractor shall perform the following work on the Project : _____ (the "Work"). Contractor will perform the Work according to the terms and conditions of this Supplement and the Contract Documents, which are incorporated herein by this reference.

The Contractor, in consideration of the Contract Value to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the OUS General Conditions referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. The Contract Value is the amount contemplated by the Base Bid adjusted for Alternates **Identify accepted Alternates**, as indicated in the accepted Bid. Also, the following documents are incorporated by reference in this Contract and made a part hereof if checked for inclusion [X]:

- | | |
|---------------------------------------------------------------|--------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Invitation to Bid | <input checked="" type="checkbox"/> Instruction to Bidders |
| <input checked="" type="checkbox"/> OUS General Conditions | <input checked="" type="checkbox"/> Supplemental General Conditions |
| <input checked="" type="checkbox"/> Prevailing Wage Rates | <input checked="" type="checkbox"/> Payroll and Certified Statement Form |
| <input checked="" type="checkbox"/> Plans and Specifications | <input checked="" type="checkbox"/> Drawings and Details |
| <input checked="" type="checkbox"/> Division 1 Specifications | <input checked="" type="checkbox"/> Addenda numbered 1-XX |

3. SCHEDULE. Contractor shall perform the Work according to the following schedule:

Substantial Completion: **April 30, 2013**

Final Completion: **May 31, 2013** (the "Schedule").

4. COMPENSATION. Owner shall compensate Contractor for Work (a) in the firm, fixed-price amount of \$_____; in accordance with the requirements of the OUS Retainer General Conditions. If the Work is performed on a time and materials basis, Contractor's listing of wage rates, material unit costs and overhead charges for the Work is attached to this Supplement.

The cost of the Work under this Supplement, even if this Supplement is later amended to include additional work, must not exceed the greater of \$1,000,000 or the maximum allowable under OAR 580-063-0030.

5. TERM. This Supplement is effective on the date it has been signed by every Party hereto and all approvals required by Applicable Law have been obtained (the "Effective Date"). No Work shall be performed or payment made prior to the Effective Date. Contractor shall perform its obligations in accordance with the Contract Documents, unless this Supplement is earlier terminated or suspended.

6. PERFORMANCE AND PAYMENT BONDS. The performance and payment bond requirements for this Project are as follows (check one of the following):

As a condition precedent to the effectiveness of this Supplement and to Owner's obligation to make payment for the Work, Contractor shall provide the Owner with a performance bond and a separate payment bond in a sum equal to the Contract Price stated in Section 4 of this Supplement.

This Project has a Contract price of \$100,000 or less, and Owner has determined that performance and payment bonds will not be required for this Project.

7. MINIMUM WAGE RATES.

Prevailing Wage Rates requirements do not apply to this Project because the maximum compensation for all Owner-contracted Work does not exceed \$50,000.

Prevailing Wage Rates requirements apply to this Project because the maximum compensation for all Owner-contracted Work is more than \$50,000. Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates and the required public works bond, as outlined in Sections C.1, C.2 and G.2.3 of the OUS Retainer General Conditions. The Bureau of Labor and Industries (BOLI) wage rates and requirements set forth in the following BOLI booklet (and any listed amendments to that booklet), which are incorporated herein by reference, apply to the Work authorized under this Supplement:

PREVAILING WAGE RATES for Public Works Contracts in Oregon, January 1, 2013, which can be downloaded at the following web address:

[http://www.boli.state.or.us/BOLI/WHD/PWR/pwr_book.shtml]

The Work will take place in Multnomah County, Oregon.

8. TAX COMPLIANCE CERTIFICATION. Contractor hereby certifies and affirms, under penalty of perjury as provided in ORS 305.385(6), that, to the best of Contractor's knowledge, Contractor is not in violation of any of the tax laws described in ORS 305.380(4). For purposes of this certification, "tax laws" means a state tax imposed by ORS 320.005 to 320.150 and 403.200 to 403.250, ORS Chapters 118,

314, 316, 317, 318, 321 and 323; the elderly rental assistance program under ORS 310.630 to 310.706; and local taxes administered by the Oregon Department of Revenue under ORS 305.620.

9. INSURANCE REQUIREMENTS.

Contractor shall comply with and obtain the insurance coverage amounts stated in the OUS Retainer General Conditions.

The Owner has determined that the Contractor shall obtain insurance in the amount described in the Retainer Supplemental General Conditions, attached hereto.

10. KEY PERSONS. If checked here, the following provision is incorporated into this Supplement:

The Parties agree that certain Contractor personnel are specifically valuable to the Project (“Key Persons”). Key Persons shall not be replaced during the Project without the written consent of Owner, which shall not be unreasonably withheld. If Contractor intends to substitute personnel, Owner shall receive the request at least 15 days prior to the effective date of substitution. When replacements have been approved by Owner, Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the Project concurrently. Upon authorization for the replacement of a Key Person, all subsequent substitutions of that Key Person shall require Owner’s written consent in accordance with this Section. The Key Persons for this Project are the following:

Project Executive: _____ shall be Contractor’s Project Executive, and will provide oversight and guidance throughout the Project term.

Project Manager: _____ shall be Contractor’s Project Manager and will participate in all meetings throughout the Project term.

Job Superintendent: _____ shall be Contractor’s on-site Job Superintendent throughout the Project term.

Project Engineer: _____ shall be Contractor’s Project Engineer, providing assistance to the Project Manager, and subcontractor and supplier coordination throughout the Project term.

11. OTHER TERMS. Except as specifically modified by this Supplement, all terms of the Retainer Contract remain unchanged.

12. EXECUTION AND COUNTERPARTS. This Supplement may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

Contractor hereby confirms and certifies that the representations, warranties, and certifications contained in the Retainer Contract remain true and correct as of the Effective Date of this Supplement.

IN WITNESS HEREOF, the Parties have duly executed this Supplement as of the dates indicated below.

_____, Contractor

The State Board of Higher Education, acting by
and through Portland State University, Owner

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

**OREGON UNIVERSITY SYSTEM
SUPPLEMENTAL GENERAL CONDITIONS
To The
GENERAL CONDITIONS
FOR RETAINER CONTRACTS**

Project Name: UCB 4th Floor Abatement ITB

The following modify the July 2012 Oregon University System General Conditions for Retainer Contracts (“OUS General Conditions”) for this Contract. Where a portion of the OUS Public Improvement General Conditions is modified by these Supplemental General Conditions, the unaltered portions shall remain in effect.

Section B.4 is revised to read:

“Contractor shall obtain and pay for all necessary permits and licenses, except for those specifically excluded in the Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Owner shall obtain and pay for the general building permit. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities. The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent or other proprietary rights and save harmless and blameless from loss, on account thereof, the State of Oregon, and its departments, divisions, members and employees.

OREGON UNIVERSITY SYSTEM
GENERAL CONDITIONS
FOR RETAINER CONTRACTS

July 1, 2012

INSTRUCTIONS: The attached **Oregon University System General Conditions for Retainer Contracts ("OUS Retainer General Conditions")** apply to all designated retainer contracts. Changes to the OUS Retainer General Conditions (including any additions, deletions or substitutions) should only be made by attaching Retainer Supplemental General Conditions. The text of these OUS Retainer General Conditions should not otherwise be altered.

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**OREGON UNIVERSITY SYSTEM
GENERAL CONDITIONS FOR RETAINER CONTRACTS
("OUS Retainer General Conditions")**

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

AMENDMENT, means a writing which, when fully executed by the Parties to this Contract, constitutes a change to a Contract Document. Amendments to Supplements (hereinafter a "Supplement Amendment") shall be issued in accordance with the changes provisions of Section D and, if applicable, establish a Contract Price or Contract Time adjustment.

APPLICABLE LAWS, means federal, state and local laws, codes, rules, regulations and ordinances applicable to the Work and to the Contract.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

CHANGE ORDER, means a written order issued by the Owner to be later included as an Amendment. A Change Order shall not be effective until codified as an Amendment.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these OUS Retainer General Conditions.

CONSTRUCTION CHANGE DIRECTIVE, means a written order by the Owner to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Solicitation Document and addenda thereto, Instructions to Offerors, Supplemental Instructions to Offerors, the OUS Retainer Contract, OUS Retainer General Conditions, Retainer Supplemental General Conditions, if any, the accepted Offer, Plans, Specifications, Supplements, Amendments, and Construction Change Directives .

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Supplement and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total of the awarded Offer amount, as increased or decreased by the price of approved alternates, as indicated in the Contract Documents.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, Medicare and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater); bond premiums, rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

MWESB REPORT, means an accurate report by the Contractor to the Owner identifying all Minority, Women and Emerging Small Business (MWESB) enterprises, as those terms are defined in ORS 200.005, receiving contracts throughout the course of the Work. An initial MWESB report is required (see Section E.2.9) and MWESB Reports are required annually (see Section E.2.9) and as a condition of final payment (see Section K.1). The initial report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts. The annual reports shall include the total number of contracts and subcontracts awarded to MWESB enterprises, the dollar value of each, and the expenditure toward each contract and subcontract during the previous twelve (12) months. The final report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts including all Supplements and Amendments incorporated during the course of the project. The reports shall only include enterprises certified with the State of Oregon as MWESB enterprises and shall include individual identification of each enterprise as a Minority business enterprise, a Women business enterprise, and/or an Emerging Small Business Enterprise, as applicable.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

OFFER, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals.

OFFEROR, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit)

and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), expenses of Contractor's offices and supplies at the job site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the job site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means the State of Oregon acting by and through the Oregon State Board of Higher Education, in its own right or on behalf of one of its institutions as identified in the Solicitation Document, also known as the Oregon University System (OUS). Owner may elect, by written notice to Contractor, to delegate certain duties to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these OUS Retainer General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, Construction Change Directives, MWESB Reports, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these OUS Retainer General Conditions, recording all Services performed.

SOLICITATION DOCUMENT, means Instructions to Bidders or Offerors or a Request for Proposal or a Request for Quotes.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.4.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner. The decision of the Owner is final.

SUPPLEMENT, means a writing which, when fully executed by the Parties thereto, constitutes written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

RETAINER SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these OUS Retainer General Conditions. Retainer Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

WORK, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

A.2 SCOPE OF WORK

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) Contract Supplements, Amendments and Construction Change Directives, with those of later date having precedence over those of an earlier date;
- (b) The Retainer Supplemental General Conditions;
- (c) The OUS Retainer Contract;
- (d) The OUS Retainer General Conditions;
- (e) Division One (General Requirements) of the Specifications;
- (f) Detailed Schedules of finishes, equipment and other items included in the Specifications;
- (g) Plans and Specifications (other than Division One and the Detailed Schedules to the Specifications);
- (h) Large-scale drawings on Plans;
- (i) Small-scale drawings on Plans;
- (j) Dimension numbers written on Plans which shall prevail and take precedence over dimensions scaled from Plans;
- (k) The Solicitation Document, and any addenda thereto;
- (l) The accepted Offer.

A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing.

A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their

meaning, the Contractor shall at once notify the Owner. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).

- A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.
- A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner, including without limitation, any nonconformity with Applicable Laws.
- A.4.4 If the Contractor believes that adjustments to cost or Contract Time is involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

- A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.
- A.7.2 Contractor represents and warrants that Contractor is not an employee of the State of Oregon for purposes of performing Work under this Contract

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

- B.1.1 The Owner shall administer the Contract as described in the Contract Documents (1) during construction (2) until final payment is due and (3) during the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.
- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.
- B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**B.2 CONTRACTOR'S MEANS AND METHODS;
MITIGATION OF IMPACTS**

- B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.
- B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.
- B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

- B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.
- B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.
- B.3.3 Work done and materials furnished shall be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.
- B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.
- B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Retainer Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities.

**B.5 COMPLIANCE WITH GOVERNMENT
REGULATIONS**

- B.5.1 Contractor shall comply with Applicable Laws pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable:
 - (i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended; (vi) all regulations and administrative rules established pursuant to the foregoing laws; and (vii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.
- B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and
 - (a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.
 - (b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or this Contract when performing the Work.
- B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor.
- B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to ORS 671.560.
- B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503)232-1987.
- B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.6 SUPERINTENDENCE

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

B.7 INSPECTION

- B.7.1 Owner shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the

discretion of the Owner, shall be removed and replaced at the Contractor's expense.

- B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.
- B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.
- B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner, the uncovering and restoration will be paid for pursuant to a Supplement Amendment.
- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.
- B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations shall have the right to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SEVERABILITY

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

B.9 ACCESS TO RECORDS

- B.9.1 Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

- B.9.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

B.10 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

B.11 SUBCONTRACTS AND ASSIGNMENT

- B.11.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these OUS Retainer General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.
- B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

- B.11.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.12 SUCCESSORS IN INTEREST

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

B.13 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor shall coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and

dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

B.14 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this Contract. The Contractor of this Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

B.15 GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

B.16 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Marion County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the State of Oregon on any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

B.17 ALLOWANCES

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Amendment. The amount of the Amendment shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (2) changes in Contractor's costs under Section B.17.2(b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any sub-subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

B.18.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.

B.18.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Supplement Amendment or Construction Change Directive has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect/Engineer's review or approval thereof.

B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner and only in accordance with a Supplement Amendment or Construction Change Directive. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor: represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.20 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

B.21 FUNDS AVAILABLE AND AUTHORIZED

Owner reasonably believes at the time of entering into this Contract that sufficient funds are available and authorized for expenditure to finance the cost of this Contract within the Owner's appropriation or limitation. Contractor understands and agrees that, to the extent that sufficient funds are not available and authorized for expenditure to finance the cost of this Contract, Owner's payment of amounts under this Contract attributable to Services performed after the last day of the current biennium is contingent on Owner receiving from the Oregon Legislative Assembly appropriations, limitations or other expenditure authority sufficient to allow Owner, in the exercise of its reasonable administrative discretion, to continue to make payments under this Contract.

B.22 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

SECTION C WAGES AND LABOR

C.1 MINIMUM WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Pursuant to ORS 279C.830(1)(d), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.

C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has

filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

- C.2.4 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:

C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.

C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.

C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.

C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

C.3.2 As a condition to Owner's performance hereunder, if Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the public contracting agency under such contract.

C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor

agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

SECTION D CHANGES IN THE WORK

D.1 CHANGES IN WORK

D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. A Supplement or Amendment is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All changes to the Work shall be documented and Amendments shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related

percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) Unit pricing may be utilized at the Owner’s option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in D.1.3(c) shall be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. In addition, the following markups shall be added to the Contractor’s or Subcontractor’s Direct Costs as full compensation for profit, Overhead and other indirect costs for Work directly performed with the Contractor’s or Subcontractor’s own forces:

On Labor.....	15%
On Equipment.....	10%
On Materials.....	10%

- (d) When adjustments to or deletions from the Work under D.1.3(c) are invoiced by an authorized Subcontractor at any level, each ascending tier Subcontractor or Contractor will be allowed a supplemental mark-up on each piece of subcontract Work covered by a an Amendment as follows:

\$0.00 - \$5,000.00	10%, and then
Over \$5,000.00	5%

Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to a Supplement Amendment. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written authorization from Owner in the form of a Supplement Amendment. Contractor shall not be required to complete such additional Work without additional authorization.

D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment. Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was

approved) as soon as possible but no later than thirty (30) Days after receipt of Owner’s request for additional Work . If Contractor’s request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor’s requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor’s claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor’s request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor’s cost of, or the Contract Time required for the performance of any other part of the Work under this Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner’s request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner’s request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor’s requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor’s analysis and evaluation of those requests with Contractor’s requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor’s requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor’s request for adjustment to compensation or Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

D.1.6 No request or Claim by the Contractor for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of final payment application under this Contract. Final payment application must be made by Contractor within the time required under Section E.6.4.

D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made, unless and only to the extent otherwise provided in the Contract Documents, to the Contractor

directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

D.2.1 Delays in construction include "Avoidable Delays", which are defined in Section D.2.1.1, and "Unavoidable Delays", which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that:

- (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of neither other parts of the Work nor the completion of the whole Work within the Contract Time.
- (c) Do not impact activities on the accepted critical path schedule.
- (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) To the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) To the extent caused by any site conditions which differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor shall notify the Owner immediately of differing site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the agrees that a differing site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.1.5 for adjustments to or deletions from Work. If the Owner disagrees that a differing site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.
- (c) To the extent caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (d) To the extent caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the project in a manner that could not be avoided by rescheduling the Work or by implementing measures to

protect against the weather so that the Work could proceed. A rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

- (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty-five percent (25 %) or more.
- (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the project site shall be considered the official agency of record for weather information.

D.2.2 Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor shall submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2, then unless otherwise prohibited by law, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits

established in these OUS Retainer General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived by Contractor.

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment, recommend approval of all or part of the Claim; or (5) propose an alternate resolution.

D.3.4 The Owner's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its request for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision. The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) Day period in order to preserve a cause of action, the parties agree that, notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the plaintiff shall promptly cause to be entered by the Court a stipulated general judgment of dismissal with prejudice, or other appropriate order limiting the scope of litigation as provided in the settlement.

D.3.6 Should the parties arrive at an impasse regarding any Claims or disputed Claims, it is agreed that the parties shall participate in mediation as specified in Section D.3.5. The mediation process will be considered to have been commenced as of the date one

party delivers to the other its request in writing to mediate. The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to comply with Owner's administrative rules governing the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality rules. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

D.3.7 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or Delay Work, in whole or in part, without a written stop work order from the Owner.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, at least ten (10) Days prior to submission of its first application for progress payment, a schedule of values ("Schedule of Values") for the contracted Work. This schedule shall provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest for overdue invoices at the rate of two-thirds of one percent per month on the progress payment, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within forty five (45) days from the latest of:

- (a) The date of the receipt of the accurate invoice;
- (b) The date Owner receives the correct application for payment if no invoice is received;
- (c) The date all goods and services have been received; or
- (d) The date a Claim is made certain by agreement of the parties or by operation of law.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers (EFT) through Automated Clearing House (ACH) payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____
Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the project site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.

(f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material and/or equipment stored and of payment for the storage site.

(g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under this Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.

(h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents,
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.1);
- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Work, Owner or another contractor;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by a Supplement Amendment;
- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;

(c) Subtract the aggregate of previous payments made by the Owner; and

(d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.2.9 Contractor shall submit its initial MWESB Report within ten (10) Days of Contractor's execution of the Contract, or if there will be a Guaranteed Maximum Price (GMP) Amendment, then within ten (10) Days of Contractor's execution of the GMP Amendment. Contractor shall submit annual MWESB Reports on June 30 of each year the Contract is active. Contracts (or GMP Amendments) first executed by Contractor within ninety (90) Days before June 30 of the year of execution by Contractor may at the discretion of Owner be exempt from submitting the annual MWESB Report otherwise due on that June 30. The final MWESB Report shall be filed with the application for final payment. Timely receipt of MWESB Reports by Owner shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of this Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed under this Contract from any state agency other than the agency that is a party to this Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in OAR 580-063-0045.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to 100 percent of the value of the Work remaining to

be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 Contractor may request in writing:

- (a) to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds and securities of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner;
- (b) for construction projects over \$1,000,000, that retainage be deposited in an interest bearing account, established through the State Treasurer for state agencies, in a bank, savings bank, trust company or savings association for the benefit of Owner, with earnings from such account accruing to the Contractor; or
- (c) that the Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims in the manner and priority as set forth for retainage.

When the Owner has accepted the Contractor's election of option (a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (c), Contractor shall accept like bonds from Subcontractors and suppliers on the project from which Contractor has required retainages.

E. 5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two-thirds of one percent per month on the final payment due Contractor, interest to commence forty five (45) Days after the date which Owner receives Contractor's final approved application for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty five (45) Days after the end of the 15-Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the controller of the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.6 FINAL PAYMENT

- E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to the Owner a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.
- E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to final payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.
- E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.
- E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

SECTION F JOB SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

- F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.
- F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the job site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Work site safety. Work site safety shall be the responsibility of the Contractor.
- F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.
- F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the site.
- F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous.
- F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.

F.3 CUTTING AND PATCHING

- F.3.1 Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.
- F.3.2 Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorney fees), or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of this Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws, including but not limited to 40 CFR Part 302, Table 302.4 and in OAR 340-142-0050, to applicable federal, state, and local regulatory and emergency response agencies. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law.)

- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.
- (e) Summary of communications about the release between Contractor and members of the press or State, local or federal officials other than Owner.
- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or well being of Contractor's or any Subcontractor's work force, property or the environment.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 FORCE MAJEURE

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

SECTION G INDEMNITY, BONDING, AND INSURANCE

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner, Architect/Engineer, Architect/Engineer's

consultants, and their respective officers, directors, agents, employees, partners, members, stockholders and affiliated companies (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses (including reasonable attorney fees), demands and actions of any nature whatsoever which arise out of, result from or are related to, (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1., (b) any accident or occurrence which happens or is alleged to have happened in or about the project site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects, (c) any failure of the Contractor to observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract, (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140), and (e) any lien filed upon the project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND

G.2.1 When the Contract Price is \$100,000 or more (or \$50,000 or more in the case of Contracts for highways, bridges and other transportation projects), the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.

G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

G.2.3 Before execution of the Contract the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Laws 2005, Chapter 360, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

G.3.1 Primary Coverage: Insurance carried by Contractor under this Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor if Contractor is negligent. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at their sole and absolute discretion.

G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 General Liability Insurance:

G.3.4.1 Commercial General Liability: Upon issuance of a Supplement, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Supplement, Commercial General Liability Insurance covering bodily injury and property damage in the amount of \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the

indemnities provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis.

- G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on site.
- G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Supplement.
- G.3.4.4 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).
- G.3.4.5: Umbrella Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.
- G.3.4.6 Pollution Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Pollution liability Insurance in minimum amounts of \$3,000,000 naming Owner as "additional insured," as noted in the "additional insured section below.
- G.3.5 Additional Insured: The general liability insurance coverage, professional liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under this Contract.
- If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000 limit per occurrence. This policy must be kept in effect for 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.
- G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is

no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to this Contract, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Work site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees Owner reserves the right to withhold payment to Contract until evidence of reinstated or replacement coverage is provided to Owner.

- G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by this Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for this contract. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Supplement.
- G.3.8 Retainer Contract Program: For the OUS Retainer Contract Program the term "Contract" as used in this Section G in the phrases "keep in effect during the term of this Contract" and "prior to execution of the Contract" shall mean each Retainer Contract Supplement issued under the Retainer Contract.

SECTION H SCHEDULE OF WORK

H.1 CONTRACT PERIOD

- H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. If required by the Contract Documents, Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed otherwise.
- H.1.2 Unless specifically extended by Supplement Amendment, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the provisions of Section D.1.
- H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

- H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by project components, labor trades, and long

lead items broken down by building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.3 PARTIAL OCCUPANCY OR USE

H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I CORRECTION OF WORK

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent reinspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs

of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

- I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its own forces. If Owner completes the repairs using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.
- I.2.2 Nothing in this Section I.2 provision shall negate guarantees or warranties for periods longer than one year including without limitation such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.
- I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.
- I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

SECTION J

SUSPENSION AND/OR TERMINATION OF THE WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:

- (a) Failure of the Contractor to correct unsafe conditions;
- (b) Failure of the Contractor to carry out any provision of the Contract;
- (c) Failure of the Contractor to carry out orders;
- (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
- (e) Time required to investigate differing site conditions;
- (f) Any reason considered to be in the public interest.

J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the project in every respect as though its prosecution had been continuous and without suspension.

J.3 COMPENSATION FOR SUSPENSION

J.3.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

- (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
- (c) If a receiver should be appointed on account of Contractor's insolvency;
- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner; or
- (f) If Contractor is otherwise in breach of any part of the Contract.
- (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE

J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of Owner or the public.

J.5.2 The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

J.6 ACTION UPON TERMINATION

J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

I.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K CONTRACT CLOSE OUT

K.1 RECORD DOCUMENTS

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire project to Owner. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed, and accurate MWESB Reports.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver three (3) complete and approved sets of O & M Manuals to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices must be signed by the Contractor and the Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.

K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. The O & M Manual shall be used as a basis for training. Training shall be a formal session held after the equipment and/or system is completely installed and operational in its normal operating environment.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all property of Owner issued to Contractor during construction such as keys, security passes, site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

K.9 SURVIVAL

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract.

SECTION 01040
PROJECT COORDINATION

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. This Section includes administrative and supervisory requirements necessary for coordinating contract documentation, communications and construction operations. The requirements of this Section relate to all work by the Contractor and Sub-contractors performing work under these Contract documents including, but not limited to, the following:

1. Pre-construction Coordination
2. Identification of Owner's Authorized Representatives
3. Identification of Architect
4. Listing of Sub-contractors
5. Contractor Emergency Contact Information
6. Safety & Emergency Procedures
7. Unforeseen Hazardous Materials
8. Permits and Fees
9. Key Requests
10. Progress Meetings
11. Requests for Clarifications & Information
12. Construction Directives
13. Construction Change Orders

1.02 RELATED WORK IN OTHER SECTIONS:

- A. Additional requirements related to Project Coordination may be found in the following:
1. Instructions to Bidders
 2. OUS General Conditions
 3. Other Sections of these specifications.

PART 2 – PRODUCTS

NOT USED

PART 1 – EXECUTION

1.01 PRE-CONSTRUCTION CONFERENCE

- A. A pre-construction conference shall predate the Work and shall include but not be limited to the following agenda:
1. Contract management and communication requirements
 2. Emergency phone numbers
 2. Record maintenance requirements
 3. Work schedule
 4. Schedule of values
 5. Submittal schedule
 6. Early purchase, long lead items and owner procurements
 7. Multiple contract coordination
 8. Maintenance of access and use of the premises
 9. Traffic control, parking and contractor's use of the job site
 10. Hazardous materials
 11. Job site safety
 12. Job site inspection & observation requirements
 13. Review of contract documents
 14. Progress meetings
 15. Other subjects of interest desired by the Contractor, Architect, Owner's Authorized Representative(s), Manufacturer's Representatives, and other participants.
- B. Refer to Division 1, Section 01300 for submittals required prior to the pre-construction conference.
- C. Coordinate all operations with the Owner's Authorized Representative during the construction period.
- D. Submit to the Owner's Authorized Representative for approval, a schedule of Values for the Work to be performed; schedule of values shall include project and building name, when the Work is to begin, and estimated duration of the Work. The Schedule of Values is to be provided to the Owner's Authorized Representative in accordance with OUS Supplemental General Condition SG-3.
- E. Submit to the Owner's Authorized Representative for approval, a schedule for the Work to be performed; schedule shall include project and building name, when the Work is to begin, and estimated duration of the Work. The Schedule is to be provided to the Owner's Authorized Representative in accordance with OUS Supplemental General Condition SG-5. The schedule shall be specific as to which portion of the Work is taking place on a particular day.
- F. Prior to start of any work, Contractor shall provide at the pre-construction meeting an emergency responsible person/contact list on a 24-hour, "7 day a week" basis for any emergency issue that may arise in connection with this project. Contractor must reissue the list any time the responsible person(s) changes. Issue to Owner's Authorized

Representative. See Project Information Sheet provided herein.

- G. Parking will not be provided on the premises. See Section 01500 Temporary Facilities.
- H. Schedule elevator usage with the Owner's Representative a minimum of 72 hours in advance so as not to inconvenience the public.

1.02 IDENTIFICATION OF OWNER'S AUTHORIZED REPRESENTATIVE

- A. The Owner's Project Manager and the Owner's Field Construction Manager (Jointly the Owner's Authorized Representative or his designee) will be appointed by the Owner and identified at the Pre-construction meeting. The Owner's Authorized Representative in conjunction with the Architect will provide coordination during construction and on-site observation. See Project Information Sheet provided herein.

1.03 IDENTIFICATION OF ARCHITECT

- A. The Owner has contracted with (Architect) to prepare construction documents and assist in Owner's Authorized Representative in the coordination of the construction project. See Project Information Sheet provided herein.

1.04 LISTING OF SUB-CONTRACTORS

- A. Provide to the Owner's Authorized Representative at the pre-construction conference three (3) copies of list of sub-contractors anticipated to perform work on the project. Provide on the list of sub-contractor's: subcontractor's name, contact person, mailing address and telephone number. Substitution shall be permitted only with the approval of the Owner's Authorized Representative.

1.05 CONTRACTOR EMERGENCY CONTACT INFORMATION

- A. Provide to the Owner's Authorized Representative at the pre-construction conference Contractor Emergency Contact telephone numbers. See Project Information Sheet provided herein.

1.06 SAFETY AND EMERGENCY PROCEDURES

- A. The Contractor shall be responsible for maintaining a safe job site at all time, until the Owner takes possession. The Contractor shall comply with all safety regulations, and for enforcing compliance with all safety regulations and procedures by all workers, sub-contractors and visitors on the site.
- B. Refer to Division 1, Section 01500 for minimal temporary facilities required for job site safety. The Contractor shall provide procedures and additional temporary facilities as required.
- C. The Contractor shall maintain indoor air quality and noise control standards specified in

Division 1, Section 01734.

- D. The Contractor shall complete and submit the Owner's Authorized Representative, at the pre-construction conference the "Construction Project Safety Form" provided herein.

1.07 UNFORESEEN HAZARDOUS MATERIAL

- A. Asbestos: The Owner has exercised due diligence in the identification and removal of asbestos containing materials from the work area. Prior to each phase of construction the Contractor shall confirm the non-existence of asbestos containing materials in the work area prior to proceeding. If the Contractor identifies materials suspected of containing asbestos, he shall immediately stop work in that area of the job site and proceed in accordance with Division 1, Section 01732, Item 3.01(F).
- B. Lead Paint: The Owner has exercised due diligence in the identification and removal of lead paint from the work area. Prior to each phase of construction the Contractor shall confirm the non-existence of materials coated with lead based paint in the work area prior to proceeding, as required in accordance with OSHA Directive CPL 2-2.58. If lead based paint materials are suspected, the contractor shall immediately notify the Owner's Authorized Representative and proceed in accordance with OSHA Standards and Directives. If required an adjustment in the Contract Sum and Contract Time will be made through Execution of a Contract Change Order in Accordance with OUS General Conditions for Public Improvement Contracts Section D.1.3(c).

1.08 PERMITS & FEES

- A. **Portland State University is enrolled in the city of Portland's Facilities Permit Program. See OUS Standard General Conditions and Supplementary General Conditions.**
- B. The Owner shall provide Building, Electrical, Mechanical and Plumbing permits for buildings in accordance with OUS Supplemental Condition SG-2. If the Contractor needs to block a portion of the right-of-way, the Contractor must secure the proper permits from the City of Portland and shall give all requisite notices to public authorities. The Contractor shall be responsible for all violations of the law for any cause in connection with the Work or caused by obstructing streets or sidewalks.
- C. The Contractor shall provide proper notice to all governing jurisdictions including but not limited to the Oregon Department of Environmental Quality prior to beginning work.
- D. Contractor shall pay for and document Oregon Bureau of Labor and Industries fees as required by Bureau of Labor & Industry.

1.09 KEY REQUESTS

- A. Keys will be provided to the Contractor as required for access to buildings and work areas. There is a deposit of \$100.00 required for each key given to the Contractor.

Contractor shall fill out Contractor's key request form and deliver for approval to Project Manager a minimum of 48 hours in advance. This deposit will be refunded upon return of the key(s.) Keys will not be provided to sub-contractors, nor will Facilities open locked doors for Contractor's employees or sub-contractors. Contractor shall provide and coordinate all such requirements.

1.10 PROGRESS MEETINGS

- A. The contractor shall schedule for the contractor's Project Manager and Field Superintendent to attend weekly Progress Meetings with the Architect and the Owner's Authorized Representative. The contractor shall coordinate and assure the attendance of sub-contractors as required by the agenda and the Owner's Authorized Representative.
- B. Weekly Progress Meetings shall be held on days and times to be determined, following the pre-construction conference and continuing through substantial completion and until final completion. The Owner's Authorized Representative may require additional on-site 'tail-gate' meetings as necessary to resolve construction related issues and facilitate continued progress.
- C. Progress meetings shall be held at:
 - PSU, Office of Facilities
 - 202 University Services Building
 - 617 SW Montgomery
- D. The progress meeting minutes serve as the official communication between all parties involved in the Project. The Contractor shall:
 - 1. Prepare agendas.
 - 2. Record minutes and include decisions.
 - 3. Record attendance
 - 4. Distribute minutes to attendees within three (3) calendar days after meetings.
- E. Minimum agenda shall include:
 - 1. Review and approve minutes of previous meetings.
 - 2. Review work progress and work schedule since previous meeting.
 - 3. Discuss field observations, problems, clarifications and information required.
 - 4. Review delivery schedules, identify problems that could impede planned progress.
 - 5. Review proposed changes in construction or procedures.
 - 6. Delivery and discussion of submittals.
 - 7. Submittal of progress payment requests for review.
 - 8. Other items as may be required.

1.11 REQUESTS FOR CLARIFICATIONS AND INFORMATION

- A. Throughout the course of work, the Contractor may require clarifications or additional

information from the Architect or Owner's Authorized Representative. This information may include but not be limited to the following:

1. Clarifications whether specific work is within the scope of an item of work and no Contract adjustment is anticipated.
 2. Clarifications or interpretations of information or directions provided in the Contact Documents, for which no Contract adjustment is anticipated.
 3. Clarifications or directions as a result of unforeseen conditions, which may or may not result in adjustments to the Contact Sum or days allowed for contact completion.
 4. Additional details or information needed for construction, which were not originally included in the contract documents, which may or may not result in adjustments to the Contact Sum or days allowed for contact completion.
- B. The contractor's field superintendent shall be the principle generator of requests for clarification and information (RFI's) as a result of field operations and conditions.
- C. Three copies of requests for clarifications and information (RFI) shall be typed and submitted in accordance with the communication process described in Section 01300.
- D. All RFI's shall be sequentially numbered and include the following information:
1. Project item information as specified in Section 01300, Item 1.05.
 2. Reason for request, and clarification and information requested.
 3. Work impacted by request for clarification or information.
 4. Drawings or sketches as necessary.
 5. Contractors recommendations as appropriate.
 6. Signature and date by contractor's authorized representative.
- E. If the contractor anticipates that a change in the scope of work may be necessary in conjunction with a request for clarification or information, he may submit with the request a proposal to perform additional work as a Contract Change Order as specified herein. No changes in work shall commence without an approved RFI response, Construction Directive or Executed Contract Change Order.
- F. All RFI Responses will be by the Architect through and with the approval of the Owner's Authorized Representative.
- G. Response time to process RFI's shall be seven (7) calendar days from the date received by the Architect, to allow reasonable time for researching the question and preparing a response. If, due to unavoidable circumstances, information is needed immediately, coordinate with the Owner's Authorized Representative who will attempt to expedite a response by FAX or e-mail. When responses are expedited, an RFI must still be submitted as a confirmation of the communication prior to submitting for progress payment for the related work.
- H. A log and copies of all RFI's shall be maintained in the jobsite office, for review or reference by the Contractor, Architect and Owner's Authorized Representative.

1.12 CONSTRUCTION DIRECTIVES

- A. Construction Directives may be initiated by the Owner's Authorized Representative, or the Architect on approval of the Owner's Authorized representative, and provides interpretations of the contract documents or orders minor changes in the work, which may require changes in the Contract Sum or Contract Time, which would be subsequently executed through a Construction Change Order. Interpretation of the Contract documents shall be in accordance with OUS General conditions for Public Improvement Contracts Section A.3, and as amended by the OUS Supplemental General Conditions. Construction Directives are not Construction Change Orders. If the Contractor believes the work described in a Construction Directive requires a change in Contract Sum or Contract Time, he shall submit a proposal to perform additional work as a Construction Change Order as specified herein. Do not proceed with Construction Order work until a proposal for Change Order work has been submitted and directed to proceed by the Owner's Authorized Representative. Proceeding without authorization waives the Contractor's claim for additional Contract Sum or Contract Time.
- B. Construction Directives shall be executed using the attached Construction Directive form.

1.13 CONSTRUCTION CHANGE ORDERS

- A. Contract Bid award is based on the Base Bid. Additional work may be authorized by amending the Contract based upon Unit Prices provided in the Bid Form, the Contractor's Schedule of Values, or other Contractor Proposals approved by the Owner's Authorized Representative, and in accordance with Section D of the OUS General Conditions for Public Improvement Contracts.
- B. A Construction Change Order is a written order issued after the execution of a contract, which authorizes and directs a change in scope of work and an adjustment in the Contract Sum, Contract Time or both.
- C. A Contract Change Order request can be initiated by the Owner's Authorized Representative through a proposal request to the Contractor, or by the Contractor through submittal of a proposal request in conjunction with a RFI response or Construction Directive.
- D. The Contractor's proposal for Contract Change Order Work shall include the following:
1. Project item information as specified in Section 01300, Item 1.05.
 2. Reason for request
 3. Itemized statement of required materials and equipment, including adjustments to adjacent and dependent work.
 4. Itemized statement of required labor, including adjustments to adjacent and dependent work.
 5. Total Contract Sum adjustment required for the Change in Work.
 6. Total Contract Time adjustment required for the Change in Work.
 7. Additional Documentation as required to support the request.
 8. Signature and date by contractor's authorized representative.

- E. Construction Change Order work shall be reviewed by the Architect and the Owner's Authorized Representative and executed in accordance with OUS General Conditions for Public Improvement Contracts Section D, and as amended herein.
- F. If a fair and reasonable Contract Change Order adjustment cannot be agreed upon, the Owner's Authorized Representative may in writing direct the Contractor to proceed with the Change in Work on a 'Time and Materials' basis in accordance with OUS General Conditions for Public Improvement Contracts.

END OF SECTION

PORTLAND STATE UNIVERSITY
OFFICE OF FACILITIES
PROJECT INFORMATION

Project Name: _____ **Project No:** _____

Project Description: _____

Project Address: _____ **Work Start Date:** _____

Project Manager: _____ **Phone:** _____ **Fax:** _____

Project Site Construction Manager: _____ **Phone:** _____

Design Consultant: _____ **Phone:** _____

Address: _____

E-Mail: _____ **FAX:** _____

Bid Opening Date: _____ **Contract Bid Price:** _____

Contract Execution Date: _____ **Pre-Const. Meeting:** _____

Notice to Proceed Date: _____ **Contract Calendar Days:** _____

Final Contract Completion Date: _____ **Liquidated Damages:** NA

Contractor Name: _____ **Office Phone:** _____

Project Manager: _____ **Cell:** _____ **Pager:** _____

Contractor Office Address: _____

E-Mail: _____ **Office FAX:** _____

On Site Construction Office Address: _____ **Site Phone:** _____

Site E-Mail: _____ **Site FAX:** _____

Site Superintendent: _____ **Cell:** _____ **Pager:** _____

Contractor's Emergency & Weekend Phone:

- 1. _____
- 2. _____
- 3. _____

PORTLAND STATE UNIVERSITY
OFFICE OF FACILITIES

CONSTRUCTION PROJECT SAFETY FORM INSTRUCTIONS

The purpose of the Construction Project Safety Form is to allow contractors to plan the construction or remodeling project in such a way as to prevent injuries and protect the environment. **This form will need to be filled out by the Contractor and provided to the Owner's Authorized Representative at the preconstruction conference.**

The information provided on the form will be reviewed at the preconstruction conference.

All projects must be planned with safety consideration for people who will be in contact with the area; in particular, sight, hearing, or mobility impaired people who are not covered under OSHA regulations but are covered under general liability issues.

PSU requires that all contractors and subcontractors come to the job trained in all Occupational Safety and Health ACT (OSHA) Standards applicable to their work process. This information is outlined in the OR-OSHA document "Occupational Hazards Common to Construction & Remodeling Activities." This document can be obtained free of charge by contacting the OR-OSHA Resource Center at 1-800-922-2689 or on-line at www.OTOSHA.org.

All construction and remodeling activities regardless of size and/or scope must be fenced, barricaded, or otherwise protected (isolated) to restrict entrance and to ensure the safety of those in the general area. **All building materials and equipment need to be placed within the isolation enclosure.** Any open trenches outside the isolated space will need to be fenced or covered with approved cover (contact the Owner's Authorized Representative for specifics).

REQUIRED PROJECT ISOLATION AND BARRICADING OPEN TRENCHES FOR OUTSIDE CONSTRUCTION SITES

Construction projects that involve building a facility, any exterior remodel, any excavation, or demolition, at a minimum, will install the following perimeter isolation:

A six foot chain-link fence, with controlled access points, extending in all directions around the excavation or building site such that no area of the construction is accessible to pedestrians or unauthorized personnel or vehicles. Note: At the University's option, other barricading plans may be accepted. These may apply to projects such as road resurfacing, parking lot striping, exterior building water proofing, etc. Typical temporary construction fencing shall be covered with opaque material to prevent seeing inside the fencing. Construction fencing shall be placed on the interior side of the opaque material.
Also see Section 01600 (Contractor Staging)

Indoor projects which will create dust (cutting sheetrock, sanding, sawing etc.) are subject to the following:

1. Areas where existing doors can provide isolation will be labeled "Construction Area Authorized

Personnel Only.”

2. All other areas will be isolated by a solid barrier. The minimum barrier allowed is 4 mil poly sheeting.

Any excavation across or adjacent to sidewalks or pathways which must be left open overnight, must be identified with working, blinking, construction lights in addition to being covered.

The contractor will provide all trench covering and fencing material, PSU will not provide any materials.

PORTLAND STATE UNIVERSITY
OFFICE OF FACILITIES
CONSTRUCTION PROJECT SAFETY FORM

Complete and deliver with the Project Information sheet to the Owner's Authorized Representative at the Pre-Construction Conference.

Meeting Date: _____ Time: _____ Location: _____

Project: _____ Job #: _____

Contractor: _____ Start: _____ Completion: _____

Contractor Foreman: _____

PSU Project Mgr: _____

Emergency Fire/Medical.Security #: 911 Non-Emergency Campus Safety (503) 725-4407

Confined Space to be accessed? Y or N Location: _____

If yes, review confined space program with PSU Project Manager

Welding or hot work to be done? Y or N If yes, describe extinguisher, and fire watch, plan:

MSDS copies to be on the job site and copies available to PSU Project Manager.

Lead paint involved? Y or N Contact PSU Health and Safety Supervisor (503) 725-8458

Describe hazard mitigation plan: _____

Asbestos involved? Y or N If yes, Contact PSU Health and Safety Supervisor (503) 725-8458

Hazard Waste Plan developed? Y or N Containers: _____

_____ Storage Loc: _____

In the event of suspected hazardous materials or spill contact PSU Health and Safety Supervisor (503) 725-8458 or Cell # (503) 888-0189.

Describe hazmat spill plan: _____

Will there be any open trenches or holes? Y or N Describe plan to barricade: _____

Internal combustion engines? Y or N If yes, is CO monitoring required? Y N

Other air contaminates? Y or N If yes, describe: _____

Building air intake & return air locations: _____

(No chemical compounds to be used near functioning intake or return air locations.)

Material deliver or parking creating hazard? Y or N If yes, describe minimization plan: _____

No vehicle is allowed to park on sidewalk entrances/exits to steam tunnel (metal hatch cover).

Dust created? Y or N If yes, describe control plan: _____

Noise sources? List: _____

Describe noise control methods: _____

Crane to be used? Y or N If yes, describe plan: _____

(Loads will not be moved over or suspended above pedestrian occupied areas)

Exterior chute to be used? Y or N If yes describe plan: _____

Construction area to be fenced? Y or N Type & location: _____

Fence to be locked? Y or N Job Trailer on site? Y or N To be locked? Y or N All contractor lock keys to Security Services dispatch and PSU Project Manager

Building exitways to be blocked or restricted at any time? Y or N If yes, describe ADA alternate routes and overall egress plan: _____

Will project create interior hazards to building occupants? Y or N If yes, describe hazards and minimization plan: _____

Lock changes planned? Y or N If yes, describe location and responsible party: _____

PORTLAND STATE UNIVERSITY
OFFICE OF FACILITIES
REQUEST FOR INFORMATION

Project: _____ RFI No.: _____

Contractor: _____ Date submitted: _____

Subcontractor: _____ Date info req'd: _____

Supplier: _____

Provide all information required by Specification Division I Section 01040. Attach additional sheets as required.

Request:

Contractor _____ Date _____

Response:

Architect _____ Date _____

Acknowledgement by Owner's Rep. _____ Date _____

PORTLAND STATE UNIVERSITY
OFFICE OF FACILITIES
CONSTRUCTION DIRECTIVE

Project: _____ Directive No.: _____

Contractor: _____ Date submitted: _____

Subcontractor: _____ Date info req'd: _____

Supplier: _____

You are hereby directed to execute promptly this Directive which interprets the Contract Documents or orders minor changes in the work. If you consider that a change in Contract Sum or Contract Time is required, submit an itemized change order proposal as required by Specification Division I Section 01040. If your proposal is in order, this Directive will be superseded by a Change Order.



Description:

Architect: _____ Date: _____

Owner's Authorized Rep: _____ Date: _____

**SECTION 01045
CUTTING AND PATCHING**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work of this Section includes administrative and procedural requirements for cutting and patching.

1.02 RELATED WORK IN OTHER SECTIONS

- A. Additional information regarding cutting and patching requirements may be found in the follows:
 - 1. OUS General Conditions
 - 2. Other Sections of these specifications.
 - 3. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division I Specification Sections, apply to this Section.

1.03 QUALITY ASSURANCE:

- A. The Contractor shall perform all cutting and patching in conformance with OUS General Conditions for Public Improvements Section F.3 and as specified herein.
- B. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio. The Owner's Authorized Representative shall pre-approve all field modifications.
- C. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operation life or safety.
- D. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. The contractor shall remove and replace construction cut and patched in a visually unsatisfactory manner at no expense to the owner.

PART 2- PRODUCTS

2.1 GENERAL REQUIREMENTS:

- A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3- EXECUTION

3.1 INSPECTION:

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

3.2 PREPARATION:

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE:

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
- B. Cutting:
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
 - 2. Cut existing construction using methods least likely to damage elements retained or adjoining construction.
 - 3. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

4. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
5. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
6. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating and backfilling.
7. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter.

C. Patching:

1. Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
2. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
3. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
4. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance.
5. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
6. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

D. Cleaning:

1. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION

SECTION 01400
QUALITY REQUIREMENTS

PART 1 – GENERAL

1.01 DESCRIPTION

A. The requirements specified in this Section relate to general quality control of the Project and supplement the quality control requirements specified in the OUS General Conditions for Public Improvement Contracts and other Sections of these Specifications. The requirements of this Section relate to all work performed by all Contractors and Sub-contractors performing work under these Contract Documents and include:

1. References and standards.
2. Quality assurance submittals.
3. Mock-ups.
4. Control of installation.
5. Tolerances.
6. Testing and inspection services.
7. Manufacturers' field services.

1.02 RELATED SECTIONS

A. Additional requirements related to Quality Requirements may be provided as follows:

1. OUS General Conditions
2. Other Sections of the specifications.

1.03 REFERENCES

- A. ASTM C 1021 -Standard Practice for Laboratories Engaged in Testing of Building Sealants; 1997.
- B. ASTM C 1077 -Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2000.
- C. ASTM C 1093 -Standard Practice for Accreditation of Testing Agencies for Unit Masonry; 1995.
- D. ASTM D 3740 -Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 1999c.

- E. ASTM E 329 -Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction; 2000b.
- F. ASTM E 543 – Standard Practice for Agencies Performing Nondestructive Testing; 1999.
- G. ASTM E 548 – Standard Guide for General Criteria used for Evaluating Laboratory Competence; 1994.

1.04 SUBMITTALS

- A. Testing Agency Qualifications:
 - 1. Prior to start of Work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- B. Design Data: Submit for Architect's knowledge as contract administrator or for the Owner, for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C. Test Reports: After each test/inspection, promptly submit two copies of the report to the Contractor and additional copies to the Architect and Owner's Authorized Representative for processing through the procedure specified in Section 01300. All test reports shall include the following information:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Name of inspector.
 - 4. Date and time of sampling or inspection.
 - 5. Identification of product and specifications section.
 - 6. Location In the Project.
 - 7. Type of test/inspection.
 - 8. Date of test/inspection.
 - 9. Results of test/inspection.
 - 10. Conformance with Contract Documents.
 - 11. When requested by Architect, provide interpretation of results.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect and Owner's Authorized Representative, in accordance with the procedure specified in Section 01300. All certificates shall include the following information:
 - 1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

2. Certificates may be recent or previous test results on material or product, but must be acceptable to the Architect and Owner.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for review by Architect and Owner's Authorized Representative.
1. Submit report in duplicate within 30 days of observation to Architect for information.
 2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- G. Erection Drawings: Submit drawings for review and approval by Architect and Owner's Authorized Representative, in accordance with the procedure specified in Section 01300.
1. Submit information for the limited purpose of assessing quality control, and conformance with the design concept and contract documents.

1.05 REFERENCES AND STANDARDS

- A. For products and 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 current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

1.06 TESTING AND INSPECTION AGENCIES

- A. Unless otherwise directed in writing by the Owner's Authorized Representative, the Contractor shall make arrangements for all required testing and inspections in accordance with OUS General Conditions for Public Improvement Contracts Section B.7.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- C. Employed Agency shall comply with the following criteria:
 - 1. Testing agency: Comply with requirements of ASTM E 329, ASTM E 548, ASTM E 543, ASTM C 1021, ASTM C 1077, and ASTM C 1093.
 - 2. Inspection agency: Comply with requirements of ASTM 03740, ASTM E329, and ASTM E548.
 - 3. Laboratory: Authorized to operate in State in which Project is located.
 - 4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 - 5. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

PART 2- PRODUCTS

NOT USED

PART 3- EXECUTION

3.01 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 Architect 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. Have Work performed 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, and disfigurement.

3.02 MOCK-UPS

- A. When required by other Sections of these specifications or the Architect provide mock-ups for review of conformance with quality, performance and design intent.
- B. Review of mock-ups will be performed under provisions identified in this section and identified in the respective product specification sections.
- C. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- D. Accepted mock-ups shall be a comparison standard for the remaining Work.
- E. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

3.03 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 Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.

5. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
 6. Perform additional tests and inspections required by Architect or Owner's Authorized Representative.
 7. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of the Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency may not assume any duties of Contractor.
 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 4. To provide access to Work to be tested/inspected.
 5. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 6. To facilitate tests/inspections.
 7. To provide storage and curing of test samples.
 8. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 9. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 10. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect. Payment for re-testing will be charged to the Contractor by deducting testing charges from the Contract Price.

3.05 MANUFACTURERS' 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, as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect and Owner's Authorized Representative 30 days in advance of required observations.

1. Observer subject to approval of Architect.
 2. Observer subject to approval of Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- 3.06 DEFECT ASSESSMENT
- A. Immediately replace Work or portions of the Work not conforming to the Contract Documents at no additional cost to the Owner.

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01 DESCRIPTION:

A. The requirements specified in this Section relate to Temporary Facilities, Controls, Utilities and procedures required by all Sub-contractors through the General Contractor performing work under these Contract Documents and includes:

1. General Requirements for Temporary Facilities and Controls.
2. Temporary Utilities.
3. Temporary Electricity.
4. Temporary Lighting.
5. Temporary Heat.
6. Temporary Ventilation.
7. Temporary Telephone and Fax.
8. Temporary Water Service.
9. Temporary Sanitary Facilities.
10. Temporary Fire Protection and Detection.
11. Temporary Construction.
12. Temporary Controls.
13. Tree and Plant Protection.
14. Security.
15. Traffic Regulation and Parking.
16. Project Identification.
17. Field Office.
18. Progress Cleaning
19. Removal of Utilities, Facilities and Controls

1.02 RELATED WORK IN OTHER SECTIONS:

A. Additional requirements related Temporary Facilities and Controls may be provided as follows:

1. OUS General Conditions
2. Supplemental General Conditions

3. Other Sections of these specifications.

1.03 GENERAL TEMPORARY FACILITIES AND CONTROL REQUIREMENTS

- A. This section specifies requirements for temporary services and facilities, including such items as temporary utility services, temporary construction and support facilities, temporary controls, traffic regulations, project security and protection.
- B. Cost or usage charges for temporary services or facilities are NOT chargeable to Owner, and will NOT be considered as basis for claim for change orders.
- C. Temporary utility services required for use at the Project Site include but are not limited to the following:
 1. Water service and distribution.
 2. Temporary electric power and lighting.
 3. Telephone, Fax and e-mail service.
- D. Temporary construction and support facilities required for Project include but are not limited to the following:
 1. Temporary heat.
 2. Temporary ventilation.
 3. Sanitary facilities.
 4. Waste disposal service.
 5. Construction aids and miscellaneous general services and facilities.
 6. Temporary enclosures.
 7. Project identification, bulletin boards and signs.
 8. Field office.
 9. Parking
- E. Security and protection facilities and services required for Project include but are not limited to the following:
 1. Temporary fire protection.
 2. Barricades, warning signs and lights.
 3. Environmental protection.
- F. Comply with requirements of local laws and regulations as well as Owner's requirements governing construction, and local industry standards, in installation and maintenance of temporary services and facilities, including but not limited to the following:
 1. Building codes, including local requirements for permits, testing and inspection.
 2. Health and safety regulations.
 3. Utility company regulations and recommendations for temporary services.

4. Police and Fire Department rules and recommendations.
 5. Environmental Protection Agency regulations and requirements.
 6. Hazardous Materials Safety Regulations.
- G. Comply with requirements of NFPA Code 241, "Standards for Safeguarding Building Construction and Demolition Operations" and ANSI -A 10 Series standards for "safety Requirements for Construction and Demolition" and AGC/ASA/ASC Joint Guideline #5, "Temporary Job Utility and Services". Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services" as prepared jointly by AGC and ASC for industry recommendations
- H. Inspect and test each service before placing temporary utilities in use. Arrange for required inspections and tests by governing authorities, and obtain required certifications and permits for use.
- I. During progress of Work, submit copies of reports and permits required by governing authorities, or necessary for installation and efficient operation of temporary services and facilities.
- J. Provide each temporary service and facility ready for use at each location when service or facility is first needed to avoid delay in performance of Work. Maintain or expand as required and modify temporary services and facilities as needed throughout progress of Work. Do not remove until services or facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.
- K. Operate temporary services and facilities in safe and efficient manner. Do not overload temporary services or facilities, and do not permit them to interfere with progress of Work. Should services of independent engineer be required to survey existing or temporary utilities, it shall be at no cost to Owner. Do not allow unsanitary conditions, public nuisances or hazardous conditions to develop or persist at the Site.
- L. Do not permit disruption of existing services, freezing of pipes, flooding or contamination of water sources.
- M. Maintain temporary facilities in such manner as to prevent discomfort to users. Take necessary fire protection measures. Maintain temporary support facilities in sanitary manner so as to avoid health problems and other deleterious effects.
- N. Maintain Site security and protection measures in safe, lawful and publicly acceptable manner. Take necessary measures to prevent site erosion, as applicable. At not time is Site to be without protective fence enclosure(s), as required to protect general public.

1.04 TEMPORARY UTILITIES

- A. Coordinate with the Owner's Authorized Representative and make connections to existing services to provide temporary services to the Project. Connections to the service shall be the responsibility of the Contractor.
- B. Coordinate with the Owner's Authorized Representative for acceptable time for service interruptions, where necessary to make connections for temporary services.
- C. Do not interrupt any utility service. Seventy-two (72) hours prior request and approval from the Owner's Authorized Representative is required to enable the Owner to shut down any utility required for the work. Contractor's employees shall **not** shut down utilities.

1.05 TEMPORARY WATER SERVICE

- A. Provide temporary water service and distribution piping of sizes and pressures adequate for construction purposes throughout the construction period and until permanent service is in use, including but not limited to following uses:
 - 1. Construction processes.
 - 2. Fire protection, as appropriate.
 - 3. Drinking water.
 - 4. Cleaning.
- B. Where water use is authorized by Owner's Authorized Representative, connect to Owner's metered source, usage will be paid by Owner. Contractor shall exercise water conservation measures, provide hoses with threaded connection and provide temporary pipe insulation to prevent freezing. Owner's Authorized Representative reserves the right to require the Contract to furnish and install a temporary flow meter during construction and pay for water use, if contractor does not exercise satisfactory water conservation measures.

1.06 TEMPORARY ELECTRICITY

- A. Provide weather proof, grounded temporary electric power service and distribution system of sufficient size, capacity and power characteristics to accommodate performance of Work during construction period.
- B. Install service and grounding in compliance with National Electric Code (NFPA 70). Include necessary meters, transformers, overload protected disconnect and main distribution switch gear.
- C. Provide metal conduit, tubing or armored cable for protection of temporary power wiring

where exposed to possible damage during construction operations.

- D. Temporary service electrical wiring will be limited to 110-120 volt, 20-amp rating, and wiring of lighting circuits may be non-metallic sheathed cable in areas where located overhead and exposed for surveillance, where permitted by code. Do not wire temporary lighting with plain, exposed (insulated) electrical conductors. Provide metal enclosures or boxes for wiring devices.
- E. For power hand tools and task lighting, provide temporary 4-gang outlets at each floor level, spaced so that 100-foot extension cord can reach each area of Work. Provide separate 110 120 volt, 20 amp circuit for each 4-gang outlet (4 outlets per circuit).

1.07 TEMPORARY LIGHTING

- A. Wherever overhead floor or roof deck has been completed, install temporary lighting adequate to provide sufficient illumination for safe Work and traffic conditions in every area of Work. Take precautions to limit glare or direct illumination into areas occupied after dark.
- B. Provide and maintain lighting for construction operations to achieve minimum lighting level of 2 watt/sq. ft.
- C. Provide and maintain 1 watt/sq. ft. lighting to staging and storage areas during periods of non-construction after dark for security purposes.
- D. Provide and maintain 0.25 watt/sq. ft. lighting to interior work areas during periods of non-construction after dark for security purposes.
- E. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- F. Maintain lighting and provide routine repairs.

1.08 TEMPORARY TELEPHONE, FAX AND E-MAIL

- A. The Owner will provide connection line(s) for temporary telephone, facsimile (FAX) machine and electronic mail service to the job site field office location. Telephone service will be local access limited. Coordinate location and setup with the Owner's Authorized Representative.
- B. The Contractor shall provide temporary on site telephone equipment, facsimile (Fax) machine and electronic mail access system on dedicated lines at field office. See Section 01300, Project Administration for off site emergency contact requirements.

- C. Maintain temporary telephone, facsimile and e-mail service from start of Work through Final Completion.

1.09 TEMPORARY HEAT

- A. Provide and pay for heat devices as required to maintain specified conditions for construction operations.

1.10 TEMPORARY VENTILATION

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases. See Section 01734, Indoor Air Quality for addition temporary ventilation requirements.

1.11 TEMPORARY SANITARY FACILITIES

- A. The Contractor and subcontractors may use Owner designated restroom facilities located on the premises. The Contractor shall be responsible for maintaining the designated restroom facilities in a clean and sanitary condition or the privilege may be revoked. Coordinate restroom use with the Owner's Authorized Representative.
- B. Do not discharge liquid wastes into sewers or drainage facilities, containing excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways. The contractor shall bear the cost of any damages to the sewer system, caused directly or indirectly by his crews or subcontractors.

1.12 WASTE DISPOSAL SERVICE

- A. If existing sewers or drainage facilities cannot be lawfully used for discharge of liquid waste, provide containers to remove and dispose of waste off Site in a lawful manner. See Section 01732, Waste Management
- B. Provide solid waste disposal and recycling facilities for the removal of construction related materials, trash and debris, in accordance with Section 01732. No on-site area is available for a 'roll-off' dumpster location. Coordinate with the City of Portland and the Owner's Authorized Representative the 'hooding' of parking meters and the use of public right-of-way for rubbish disposal as required.
- C. Do not dispose of hazardous materials in a manner that could allow the materials to enter landfills, waterways or other unapproved facilities. The Contractor shall comply with the hazardous material provisions of OUS General Conditions for Public Improvements Section F, and Division 1 Section 1732.

1.13 CONSTRUCTION AIDS & GENERAL SERVICE FACILITIES

A. Construction Aids:

1. Design, construct and maintain construction aids and miscellaneous general services facilities as needed to accommodate performance of Work. Construction aids and miscellaneous general services and facilities include, but are not limited to the following:
 - 1) Temporary stairs and ladders.
 - 2) Guardrails and barriers.
 - 3) Walkways.
2. Provide temporary stairs where ladders are not adequate for proper, safe or efficient performance of Work.
3. Install and maintain temporary walkways around work and to field offices, toilets and other similar areas. Construct walkways of gravel or duckboard units.
4. Provide lifting devices necessary for the proper and efficient movement of materials; provide operating personnel for equipment as required. Provide for use of all hoisting equipment on the project during "off hours" as required to prevent impeding the project schedule.

B. Pollution Control:

1. Provide general protection facilities, operate temporary facilities, conduct construction activities, and enforce strict discipline for personnel on Site by methods which comply with environmental regulations, and that minimize possibility that air, water and subsoil may be contaminated or polluted, or that other undesirable effects may occur from performance of Work.

A. Noise Control:

1. Contractor shall provide and maintain adequate and effective mufflers, sound barriers and controls for all construction equipment so that noise from this equipment can be controlled to satisfaction of Owner. Coordinate with Owner's Authorized Representative when construction work requires use of air hammers or other objectionable noisy equipment. Comply with all laws and regulations applicable the noise pollution abatement and workplace noise. See Section 01734.
2. Rotohammering, grinding, drilling or other excessively noisy operations shall be coordinated with Owner's Authorized Representative and scheduled to avoid impacting building occupants. Jack hammering shall not be allowed at existing building interiors.

B. Dust Control:

1. All streets, roads or detours used for hauling materials shall be oil dust treated as required to prevent dust, or continually watered to prevent dust. Dust prevention measures, both indoors and outdoors shall be continuous until Final Acceptance by Owner.
2. Provide interior dust control measures, such as temporary partitions, taping of air spaces at doors, maintenance of filters and protection of ducts, etc., as required to control dust. Coordinate to prevent accidental activation of particulate-sensing fire detection system as described under requirements for Hot Work Permit.

A. Erosion and Sediment Control:

1. Follow city approved master erosion control plan, when applicable. Maintain copy on site.

1.14 TEMPORARY ENCLOSURES

A. Security:

1. The Contractor shall be responsible for any and all protections required during performance of the work, and shall be responsible for any and all damages as specified in OUS General Conditions for Public Improvement Contracts Section G1.1. 2. The Owner will not be responsible for protection of materials or equipment from vandalism or theft. Security is the responsibility of the Contractor.

B. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism or theft.

C. Maintain a security program continuously throughout Project, until Owner occupancy or Owner acceptance precludes, need for security program.

D. Barriers:

1. Comply with recognized standards and code requirements for erection of substantially adequate barriers where needed to prevent accidents and losses. Paint with appropriate colors, graphics and warning signs to inform construction personnel and public of hazard of concern. Provide lighting and flashing signals as required.
2. Provide barriers to prevent unauthorized entry to construction areas to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
3. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
4. Protect non-owned vehicular traffic, stored materials, site and structures from

damage.

E. Fencing:

1. Where fencing is required, install general enclosure fence with suitable lock for gates. Locate where indicated on Drawings or as required to substantially complete enclosure around Site or staging/construction operations. Install in a manner that will prevent unauthorized persons from easily entering Site. Except when otherwise directed, provide open-mesh, chain-link fencing with posts substantially set in ground, or in moveable concrete blocks.
2. Within five days of Commencement of Work, Contractor shall provide fencing plan for approval by Owner. Plan shall indicate existing fencing to remain, new fencing required and type, location and sequencing of temporary barriers or fencing required for fencing outside primary Site.

F. Protection of Installed Work:

1. Protect installed Work and provide special protection where specified in individual j Specification Sections.
2. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
3. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
4. 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.

1.15 PROJECT IDENTIFICATION

A. Project Identification Signage:

1. Project Identification Signage will be furnished by Owner and installed by Contractor. Coordinate signage placement with the Owner's Authorized Representative.
2. Project Identification Signage shall be installed by the Contractor within five (5) days of delivery by the Owner and shall be removed by the Contractor following notice of Substantial Completion and prior to Final Completion. Upon removal Project Identification Signage shall become the property of the contractor.
3. Project Identification Sign will consist of two signs, 4'x8' =32 sq ft area, 3/4" marine plywood mounted. Contractor to provide 4"x4" post or other materials and means to mount sign with bottom of sign 4 feet above ground.

B. Project Informational Signs:

1. Contractor shall provide temporary directional signs to direct traffic into and within site. Relocate as Work progress requires.

1.16 FIELD OFFICE

- A. Provide field office area, and storage and staging locations within the defined scope of work area and in a location approved by the Owner's Authorized Representative. Provide temporary lighting, heated and ventilation as specified herein.
- B. Provide plan table, notice boards and other furnishings as require for Contractor's daily operations and as required by the Owner's Authorized Representative.
- C. Provide on-site office equipment as specified herein.
- D. Relocate field office area, and storage and staging location as required to not impede work. At completion of Work, remove buildings, utility service and debris. Restore area to prior condition.

1.17 TRAFFIC REGULATION AND PARKING

- A. Traffic Control:
 - 1. Comply with all rules and regulations of Owner, City, State and county authorities regarding closing of public streets to use by public traffic, including pedestrians. No road shall be closed to public except by expressed by permission by Owner and City. Control obstructions and hazards with approved signs, barricades and lights where necessary to protect safety of public. Convenience of general public adjacent to Project, protection of persons and property, and access of emergency vehicles are of prime importance and shall be provided for in satisfactory manner.
- B. Flagging Services:
 - 1. Contractor shall provide trained flaggers and barricade hazardous operations during construction activities requiring the use of street areas, as directed by the Owner's Authorized representative. Equip flaggers and guards on duty with approved red work apparel and stop/slow paddle kept clean and in good condition.
 - 2. Utilize traffic control cones, drums, flares and lights which are approved by the city of Portland Bureau of Transportation. Use flares and lights during hours of low visibility to delineate traffic lanes and guide traffic.
- C. Temporary Use of Roads:
 - 1. Provide detours necessary for unimpeded traffic flow.
 - 2. Provide and maintain unobstructed access to fire hydrants.
 - 3. Maintain emergency vehicle top access to the premises.

- D. Construction Related Parking Control:
1. Contractor, sub-contractor and employee parking will not be provided on the premises. The purchase of hoods for parking meters from the city of Portland is suggested.
 2. Coordinate all construction deliveries with the Owner's Authorized Representative. Purchase and obtain a temporary parking permit from the Portland State University office of Transportation and Parking twenty-four (24) hours prior to anticipated delivery parking need. Temporary construction related parking shall be limited to an assigned staging area as approved in writing by the Owner's Authorized Representative. designated for Contractor's use.
 3. The Contractor shall be responsible for all contractor and sub-contractor parking citations by the City of Portland and the Portland State University office of Transportation and Parking. All citations must be paid prior to submission of Notice of Final Completion and Request for Final Payment.

1.18 TEMPORARY FIRE PROTECTION

- A. Until fire protection needs may be fulfilled by permanent facilities, install and maintain temporary fire protection facilities of types needed to adequately protect against reasonably predictable and controllable fire losses.
1. Provide equipment of adequate capacity to extinguish minor fires in combustible material on the Premises during the construction period.
 2. Comply with applicable recommendations of NFPA Standard 10 "Standard for Portable Fire Extinguishers".
 3. Maintain equipment in working condition with current inspection certificate attached to each.
 4. Locate fire extinguishers where they are most convenient, visible and effective for their intended purpose, but provide no less than one extinguisher on each floor or in each general Work area, at or near each usable stairwell.
 5. Store combustible materials in containers in recognized fire-safe areas.
- B. Develop and supervise overall fire prevention and first-aid fire protection program for personnel at Project Site.
1. Review needs with local fire department officials and establish procedures to be followed.
 2. Smoking is prohibited on the premises. Contractor's personnel are to abide by all rules and regulations regarding smoking and all other fire prevention regulations in force where the Work is to be performed. Smoking is not permitted in structures on the PSU campus.
 3. Post warning and information and enforce strict discipline.
 4. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires.

5. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of Ignition for fire.
6. Contractor shall ensure that contractor's employees are familiar with Owner's fire procedures and location of fire hydrants and extinguishers in adjacent parts of building adjacent to the construction area.

1.19 PROGRESS CLEANING

- A. Dirt and debris of all nature caused by execution of Work shall be removed from the Site at end of each work day. Contractor shall be responsible for disposal of all scraps and materials that are relative to this Project.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing space.
- C. Hose all paved areas staged with construction material and generally prepare area of Work for occupancy with no further clean-up required by Owner.
- D. Clean all spilled dirt, gravel or other foreign material caused by construction operations from all streets and roads at conclusion of each day's operations. Cleaning of large areas shall be by grader and front-end loader supplemented by washing with water power brushing and hand labor.
- E. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- F. Remove waste materials, debris, and rubbish from Site daily and dispose off-site.

1.20 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of two (2) feet. Grade site as indicated. C. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

END OF SECTION

**SECTION 01550
CONTRACTOR PARKING**

PART I - GENERAL

1.01 DESCRIPTION

- A. All parking costs and expenses incurred by any contractor in the course of doing business on Owner's property are the sole responsibility of such contractor. There is no free parking on the Owner's property. Parking rates for the City of Portland are posted at the parking entrances or on parking meters. Vehicles without permits may be towed away at the expense of the vehicle's owner. Parking is not allowed on any Owner's roadway unless so indicated. The Contractor's authorized representative can obtain parking permits for its employees from the Portland State University Transportation & Parking Services Office, Academic & Student Recreation Center, 1812 SW 6th Avenue (503.725.6245) at prevailing rates. All costs for parking permits, parking in University parking lots and ramps, and any fines incurred by any contractor shall be the responsibility of the contractor.
- B. Contractor shall not park in any area not designated for vehicle parking. It will be the responsibility of such contractor to repair and/or reimburse Owner for any damage to Owner's property caused by contractor's vehicle.
- C. Vehicles to be parked on the Owner's property shall be governed by Owner's Transportation & Parking Services Office.

1.02 RELATED SECTIONS

- A. Additional requirements related to Quality Requirements may be provided as follows:
 - 1. OUS General Conditions
 - 3. Other Sections of the specifications.

END OF SECTION

**SECTION 01600
CONTRACTOR STAGING**

PART 1 - GENERAL

1.01 BUILDING ENTRY/ROUTES

- A. Contractor shall schedule all necessary material stocking, demolition and trash removal through building corridors and elevators during non-peak hours or as approved by the PSU (or “Owner”) Project Manager. All materials will be brought into the building through the loading dock or approved entry and transported using the Owner’s assigned elevator.
- B. The loading dock or entry is only to be used for loading and unloading. The loading dock or entry will not be used for parking. Vehicles left unattended will be towed at the expense of the Contractor.

1.02 PARKING

- A. Unless stated in a Contract, all parking will be at the expense of the Contractor. All vehicles parked on Owner’s property must have a parking permit. The Contractor must arrange and secure for all temporary parking permits. Due to limited space, only work vehicles will be allowed at the worksite, and these may enclosed within the Contractor’s assigned fenced work area. Contractor shall make every effort to carpool to the worksite when possible. It is the Contractor’s responsibility to secure all parking permits or pay the appropriate meter.

1.03 STAGING/LAY DOWN AREA

- A. During each phase of Construction, areas required for staging must be submitted to the Owner at least three (3) weeks in advance of the requirement. The date when the area will be reusable by Owner must be included.
- B. During construction, the Contractor shall provide all security for its materials, offices, staging and construction parking areas, etc. Owner shall have no responsibility for any of these items. Contractor shall also be responsible for maintaining a safe construction area on Owner’s property and offsite as well, including, without limitation, keeping all public and private roadways and parking areas clean, safe and functioning. The Contractor shall only be obligated clean up of those portions of public or private roadways and parking which have been affected by Contractor's activities.
 - 1. Use of lay down area is for the staging and storing of construction related equipment or material for Contractor construction activities only as related to PSU projects.
 - 2. Contractor is responsible for making sure the lay down area complies with all

local building and fire codes and regulations and all Owner's safety codes and requirements.

3. Contractor is responsible for keeping the grounds surrounding the lay down area safe and clean of construction materials, litter, trash, and scrap materials. Continuous housekeeping is required including daily removal of combustible waste and storage of combustible waste in approved metal containers and trash bins with metal lids. Outdoor tool and equipment power cords shall be removed nightly. Clean-up and sweeping to be done on a daily basis at the completion of a work shift.
4. Contractor is responsible for their own trash management, including removal of trash from campus. Contractor shall comply with recycling guidelines specified in the Contract Documents.
5. Work & safety rules specified in the Contract Documents apply to lay down areas. Construction Personal Protective Equipment is required in the lay down area.
6. Owner will not be held liable for any loss or damage to any contractor structures or equipment in the lay down area.
7. There is NO SMOKING in the lay down area or inside structures or shipping containers in the lay down area. No smoking signs shall be posted at these locations.
8. Contractor is responsible for keeping all fire and emergency access lanes surrounding the lay down area open at all times. Fire lane parking is subject to immediate tow at Contractor's expense. Fire hydrants must be accessible at all times.
9. Contractor's portable toilets must be located inside the designated lay down area and maintained to PSU's satisfaction at all times.
10. Contractors will not be permitted to store any type of construction material on top of their shipping containers or structures for safety reasons. No combustible materials will be permitted to be stored under a storage trailer.
11. Contractor shall return the lay down area in the same or better condition than

when initially used. Payment and/or fees may be withheld until repairs by the Contractor have been completed to PSU's satisfaction.

12. If outside staging of material is required in unpaved areas, Owner is not responsible for mud, dirt, snow, rain, ice and/or rust on materials.
13. Materials stored in staging area(s) must be protected from the elements and from damage or degradation as required in contract documents.
14. Typical temporary construction fencing shall be covered with opaque material to prevent seeing inside the fencing. Construction fencing shall be placed on the interior side of the opaque material.
15. The lay down area shall be made as small as possible and configured to minimize impact to the daily operations of the campus. Contractor to use lay down area for minimal amount of material inventory as required to provide an efficient construction process.

END OF SECTION

**SECTION 01732
WASTE MANAGEMENT**

PART 1- GENERAL

1.01 PROJECT GOALS

- A. The Owner requires that this project generate the least amount of waste and trash possible.
- B. This project has been designed to comply with SEED (State Energy Efficient Design) criteria. The Contractor, sub-contractors and suppliers shall work with the design team and Owner's Authorized Representative to achieve as sustainable of a project as possible from initial control of the site through final completion.

1.02 RELATED WORK IN OTHER SECTIONS

- A. Additional waste management requirements may be found in the following:
 - 1. OUS General Conditions
 - 2. Other Sections of these specifications.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Non-hazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for

remanufacture into a new product for reuse by others.

- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.4 WASTE MANAGEMENT REQUIREMENTS

- A. The contractor shall familiarize himself with the relevant requirements, provide the necessary documentation and instruct all sub-contractors and suppliers regarding energy efficiency, air quality, demolition, recycling, waste management and final cleaning.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.

3. Dumping or burying on other property, public or private.
 4. Other illegal dumping or burying.
- E. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, State and local requirements, pertaining to legal disposal of all construction and demolition waste materials.
1. The city of Portland requires all building projects with a permit value of \$50,000 or more to separate and recycle certain materials from the job site. The contractor shall be responsible for assuring recycling at the job site and for completing the pre-construction recycling plan form.

PART 2- PRODUCTS

- 2.01 Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, incineration, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues. See Division 1 Section 01300 for submittal procedures.
- 2.02 Submit Waste Disposal Reports with each application for progress payment, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report. Failure to submit Report will delay payment. Prepare Waste Disposal Reports as follows:
- A. Submit Report on a form acceptable to Owner.
 - B. Landfill Disposal: Include the following information:
 1. Identification of material.
 2. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
 3. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
 4. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - C. Incinerator Disposal: Include the following information:
 1. Identification of material.
 2. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
 3. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
 4. Included manifest, weight tickets, receipts, and invoices as evidence of quantity and cost.

- D. Recycled and Salvaged Materials: Include the following information for each:
 - 1. Identification of material, including those retrieved by installer for use on other projects.
 - 2. Amount, in tons or cubic yards, date removed from the project site, and receiving party.
 - 3. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
 - 4. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - 5. Certification by receiving party that materials will not be disposed of in landfills or by incineration.

- E. Material Reused on Project: Include the following information for each:
 - 1. Identification of material and how it was used in the project.
 - 2. Amount, in tons or cubic yards.
 - 3. Include weight tickets as evidence of quantity.

- F. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

PART 3- EXECUTION

3.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Designate an on-site person or persons responsible for instructing workers and overseeing documenting results of the Waste Management Plan.

- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Architect, and Owner’s Authorized Representative.

- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
 - 1. Pre-bid meeting
 - 2. Pre-construction meeting
 - 3. Regular job-site meetings.

- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.

1. Provide containers as required.
 2. Provide adequate space for pick-up and delivery and convenience to contractors.
 3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. Hazardous Materials: If, during the course of the Work, the Contractor observes or suspects the existence of Hazardous Materials in the structure or components within the defined scope of work area, the Contractor shall immediately stop Work in the immediate area and notify the Owner's Authorized Representative, who will, under separate contract, facilitate the remove of the hazardous material. The Contractor will be required to schedule ten (10) days of slack or "down" time for the removal of potential unforeseen materials. Any delay caused by asbestos abatement that lasts less than ten (10) days shall not constitute a delay as defined in Section D.2 of the OUS General Conditions for Public Improvement Contracts and shall not result in any additional compensation to the contractor. If removal of the material takes more than ten (10) days, the Contractor shall be entitled to an extension of the completion date for the Work equal to the number of days required for removal, plus reimbursement for Contractor's cost of the Work for only those days in excess of ten (10).
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION

**SECTION 01734
INDOOR AIR QUALITY**

PART 1- GENERAL

1.01 PROJECT GOALS

- A. The owner and building tenants will occupy adjacent areas of the premises during the entire period of construction. The Contractor shall maintain indoor air quality of occupied spaces throughout the construction period to permit normal operations and upon substantial completion provide premises and building systems that meet minimal indoor air quality standards as described herein.

- B. Dust and Airborne Particulates: Prevent dust and other particulates from entering HVAC ducts and equipment, and from migrating into occupied spaces.
 - 1. Cleaning of existing ductwork to remain is not contemplated under this contract. Verify the condition of existing ducts and equipment prior to starting work.
 - 2. The Contractor shall bear the cost of duct and equipment cleaning required due to failure to protect ducts and equipment from construction dust.
 - 3. The Contractor shall coordinate with the Owner's Authorized Representative and provide adequate barriers, taping, ventilation and filters to prevent dust, fumes, odors, vapors or other agents from impacting normal operations in adjacent occupied spaces. Failure to do so may result in suspension of Work at the Contractor's expense.
 - 4. Procedures and products have been specified to minimize indoor air pollutants:
 - A) Furnish Products meeting or exceeding the specifications.
 - B) Avoid construction practices that could result in contamination of installed products leading to indoor air pollution.

1.02 RELATED WORK IN OTHER SECTIONS

- A. Additional information related to Indoor Air Quality management requirements, temporary facilities required and Owner's remedies for non-compliance may be found in the following:
 - 1. OUS General Conditions
 - 2. Other Sections of these specifications.

1.03 REFERENCES

- A. ASHRE 62 – Ventilation For Acceptable Indoor Air Quality; 1999 and Addenda.
- B. ASHRAE Std. 129 – Measuring Air-Change Effectiveness; 1997.

- C. Oregon Administrative Rules Sections; 437-002—0081, 437-002-0107, 437-002-0382.
- D. Oregon Administrative Rules Section 437-003-0027.

1.04 DEFINITIONS

- A. Absorptive Materials: Gypsum board, acoustical ceiling tile and panels, carpet and carpet tile, fabrics, fibrous insulation, and other similar products.
- B. Contaminates: Gases, vapors, smoke, airborne mold and mildew, and other regulated pollutants including but not limited to construction related noise.
- C. Particulates: Dust, dirt and other airborne solid matter.
- D. Wet Work: Concrete, plaster, coatings, adhesives and other products that emit water vapor or volatile organic compounds during the installation, drying, or curing processes.

PART 2- PRODUCTS

NOT USED

PART 3- EXECUTION

3.1 CONSTRUCTION PROCEDURES

- A. Prevent the absorption of moisture and humidity by absorptive materials by:
 - 1. Sequencing the delivery of such materials so that they are not present in the building until wet work is completed and dry.
 - 2. Delivering and storing such materials in fully sealed moisture-impermeable packaging.
 - 3. Provide sufficient ventilation for drying of wet work without impacting delivery schedules.
- B. Begin temporary construction heating and ventilation as soon as the work limits are substantially enclosed.
- C. If extremely dusty or dirty work must be performed, coordinate the temporary shut down of HVAC systems with the Owner's Authorized Representative. The Owner's

Authorized Representative may require work by the Contractor outside of normal business hours (8:00 AM through 5:00 PM) if HVAC systems serving occupied areas are required to be shut down for extended periods.

- D. When working in a portion of an occupied building, provide barriers necessary to prevent movement of air from the construction area to occupied areas.
- E. HVAC equipment and ductwork SHALL NOT be used for ventilation during construction:
 - 1. Provide minimum temporary ventilation equivalent to 1.5 air changes per hour. Increase as required for wet work.
 - 2. Exhaust directly to outside. The Owner's Authorized Representative shall approve the Contractor's exhaust venting plan including; equipment, routing and outlet prior to installation.
 - 3. Seal HVAC air inlets and outlets immediately after duct installations.
- F. Do not store construction materials or waste in mechanical rooms, electrical rooms or exit ways. Coordinate all materials storage with the Owner's Authorized Representative.
- G. Prior to use of return air ductworks without intake filters, remove dust and debris generated by construction activities.
 - 1. Inspect duct intakes, return air grills, and terminal units for dust.
 - 2. Clean plenum spaces, including top sides of lay-in ceilings, outsides of ducts, tops of pipes and conduits.
 - 3. Clean tops of doors and frames.
 - 4. Clean mechanical and electrical rooms where work is performed, including the tops of pipes, ducts, conduits, equipment and supports.
 - 5. Clean return plenums of air handling units.
 - 6. Remove intake filters last, after all cleaning operations are complete.
- H. Do not perform dusty or dirty work after starting use of return air ducts without intake filters.
- I. Use other relevant recommendations of SMACNA IAQ Guidelines for Occupied Buildings Under Construction to avoid unnecessary contaminants due to the construction

process.

- J. Perform Air Contaminant Testing as specified herein.

3.02 AIR CONTAMINANT TESTING:

- A. Perform air contaminate testing before starting construction, as a baseline for evaluating post-occupancy test results, as specified herein.
- B. Perform air contaminate testing prior to submitting for substantial completion.
- C. Do not start air contaminant testing until:
 - 1. All other construction operations are substantially complete.
 - 2. HVAC systems have been tested adjusted, and balanced for proper operation.
 - 3. New HVAC unit air filters have been installed.
- D. Collect the following indoor air samples from representative spaces of the work areas:
 - 1. Collect samples while windows and exterior doors are closed, HVAC system is in normal operation and the building premises are unoccupied.
 - 2. Collect samples in each space served by the new air handling system.
 - 3. Collect air samples between a height of 48 inches and 72 inches above finished floor.
 - 4. Collect samples from same locations on three separate days and average the results of the three samples.
- E. Submit a report analyze the air samples and compare them against the pre-construction baseline (See Section 01300 for submittal procedure).
- F. Air Contamination Concentrations and Limits shall be as set forth in the Oregon Administrative Rules and as follows (the most restrictive shall apply):
 - 1. Carbon Monoxide: Measure in ppm, in relation to outside air, at air intake; not more than outside air.
 - 2. Airborne Mold and Mildew: Measure in relation to outside air, at air intake, but in no case less than 48 inches above finish grade; not more than outside air.
 - 3. Formaldehyde: Measure in micrograms per cubic meter in relation to outside air, at air intake; Not more than 20 micrograms per cubic meter higher than outside air.
 - 4. Total Volatile Organic Compounds (TVOC): Measure in micrograms per cubic meter, in relation to outside air, at air intake; Not more than 200 micrograms per cubic meter higher than outside air.

5. Total Particulate Matter: Measure in micrograms per cubic meter, in relation to air, at air intake, not more than 20 micrograms per cubic meter higher than outside air.

3.03 VENTILATION EFFECTIVENESS TESTING:

- A. Perform ventilation effectiveness testing prior to substantial completion.
- B. Do not begin ventilation effectiveness testing until:
 1. HVAC systems have been tested adjusted, and balanced for proper operation.
 2. Air contamination testing has been completed satisfactorily.
 3. New HVAC unit air filter have been installed.
- C. Test each air handler zone in accordance with ASHRAE 129.
- D. If calculated air change effectiveness for a particular zone is less than 0.9 due to inadequate balancing of the system, adjust and retest at no additional cost to the Owner.

END OF SECTION

**SECTION 01780
CONTRACT CLOSEOUT**

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. The requirements specified in this Section relate to all Contractors individually performing Work under these Contract Documents and include:
 - 1. Final Cleaning
 - 2. System Start-up, Testing & Adjusting
 - 3. Operations & Maintenance Manuals
 - 4. Warranties & Bonds
 - 5. Training
 - 6. Spare Parts & Extra Quantities
 - 7. Project Record Documents
 - 8. Final Review and Payment
- B. Project closeout is a term used to describe certain collective project requirements, indicating Work under this Contract that is fulfilled near the end of the Contract time in preparation for Final Completion, as well as Final Payment to the Contractor.
- C. Special requirements for individual units of work may be included in appropriate Specification Sections of this Project Manual.

1.02 RELATED WORK IN OTHER SECTIONS

- A. Additional Contract closeout requirements may be provided as follows:
 - 1. OUS General Conditions
 - 2. Supplementary General Conditions
 - 3. Section 01300, Submittals
 - 4. Other Sections of these Specifications

PART 2 - PREREQUISITES TO SUBSTANTIAL COMPLETION

2.01 GENERAL DESCRIPTION:

- A. Substantial Completion shall be defined per OUS General Conditions for Public Improvement Contracts Section A.1, and Notification of Substantial Completion by the Contractor to the Owner shall be through the Architect as specified in Section K.4 of the same and as supplemented by OUS Supplemental General Condition SG-6. See Division 1, Section 01300 for general Submittal Review Procedure.
- B. Submit Certificate of Substantial Completion with accompanying 'punchlist' and date for

punchlist completion to the Architect once the Contract Documents have been reviewed, Work has been inspected and all prerequisites to substantial competition have been addressed.

- C. Prior to signing the Certificate of Substantial Completion, the Architect will perform one Substantial Completion review of the Work. The Contractor shall pay the cost of additional Substantial Completion reviews of the Work.

2.02 FINAL CLEANING

- A. Perform final cleaning of all items of Work prior to Substantial Completion review of the Work. Employ professional cleaners for final cleaning. Clean each surface or unit of work to condition expected from normal commercial building cleaning and maintenance program. Comply with all manufacturer's recommendations. Complete the following prior to requesting Architect's review of the Work for Substantial Completion certification:
 1. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.
 2. Vacuum all carpeted, fabric and other soft surfaces.
 3. Clean all Contractor and Owner provided equipment and fixtures.
 4. Clean or replace all filters of operating equipment.
 5. Clean debris from roofs, gutters, downspouts and drainage systems impacted by the Work.
 6. Clean the Project Site and adjacent areas impacted by the Work, including landscaped and parking areas, or rubbish, litter and other foreign substances. Sweep paved areas to broom clean condition. Remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted to smooth, even-textured surface.
 7. Re-clean areas and equipment prior to inspection for Final Completion, if dirtied in completion of punchlist work.
- B. Unless otherwise directed by the Architect or Owner's Authorized Representative, remove temporary protective devices and facilities, which were installed during the course of the Work to protect previously completed work from the remainder of the construction to be completed, or to protect the public.
- C. Comply with all safety standards and governing regulations for cleaning and dispose of waste materials in accordance with Division 1, Section 01732 and the OUS General Conditions for Public Improvement Contracts.

2.03 SYSTEM START-UP, TESTING & ADJUSTING

- A. The project has been designed to comply with SEED (State Energy Efficient Design) criteria. Coordinate with the Owner's Authorized Representative the system start-up, testing, adjusting and balancing to comply with the Owner's Commissioning requirements.
- B. The Contractor shall coordinate the scheduling for the start-up and testing of various

equipment and systems provided by the Contractor and Owner with the Owner's authorized representative.

- C. Notify the Owner's Authorized Representative and the Architect a minimum of fourteen (14) calendar days prior to the start-up or testing of each item.
- D. The Contractor shall submit to the Owner's Authorized Representative for review and approval, a minimum of fourteen (14) calendar days prior to the start-up or testing, five (5) copies of the following:
 - 1. A paragraph-by-paragraph program of the Contractor's proposed testing procedure, developed to demonstrate compliance with the contract documents.
 - 2. Check off sheets for the review of each item of equipment and system.
 - 3. Each program and check off sheet shall provide the following information:
 - 1) Project information required by Division 1, Section 01300, Item 1.05.
 - 2) Product information required by Division 1, Section 01300, Item 3.06.
 - 3) Other information as required the fully describe the item.
 - 4) Provide spaces for testing "Review" sign off by Owner's Authorized Representatives and the Architect's Authorized Representative
- E. Verify that each piece of equipment or system has been checked for proper connection of services, lubrication, drive rotation, belt tension, control sequencing or other conditions that could cause damage.
- F. Verify that tests, meter readings and specified electrical characteristics agree with those required by equipment or system manufacturers.
- G. Verify that wiring, piping and support components for equipment are complete and tested.
- H. Execute start-up under the supervision of the Owner's Authorized Representative(s), the responsible manufacturer's representative, Contractor's personnel in accordance with the manufacture's recommendations.
- I. Submit five (5) copies of all Installation, Adjustment and Balancing and Testing Reports for each piece of equipment and system in accordance with the Submittal Review Procedures, specified in Division 1, Section 01300, Item 3.01.
- J. Operating equipment and systems shall be tested in the presence of the Owner's Authorized Representatives and the Architect's Authorized Representative to demonstrate compliance with the Contract Documents and the manufacturer's recommendations:
 - 1. Testing shall be conducted under operating conditions as specified by the Owner's Authorized Representatives and the Architect's Authorized Representative.
 - 2. Copies of all test reports shall be included in the Project Record Documents.

- K. All elements of systems shall be tested to demonstrate that total systems satisfy all requirements of the Contract Documents. Test each piece of equipment for proper operation, followed by each subsystem, followed by entire system, followed by interfaces with other major systems.
- L. The Contractor shall provide all materials and equipment required for equipment and system testing.
- M. The Contractor shall perform the following minimal tests and additional tests as required by the Owner's Authorized Representative:
 - 1. System shall be checked for proper installation, and shall be adjusted and calibrated to verify that it is ready to function as specified.
 - 2. All system elements shall be checked to verify that they have been properly installed and that all connections have been made correctly.
 - 3. All discrete elements and sub-systems shall be adjusted and balanced and shall be checked for proper operation.

2.04 OPERATIONS & MAINTENANCE MANUALS

- A. The Contractor shall Operations and Maintenance Manuals for review and project record documentation in accordance with OUS General Conditions for public Improvement Contract Section K.2, in accordance with the Submittal Review Procedures, specified in Division 1, Section 01300, Item 3.01.
- B. Include Operation and Maintenance instructions complete with technical information, required warranties & bonds and name, address and phone number of the Contractor(s) and Manufacturer(s) of each material and product. Bind in separate three-ring binders. Label similar to Project Documents binder with dividers by Specification section and supplier.

2.05 WARRANTIES & BONDS

- A. Provide all warranties and bonds specified in other Sections of this project manual.
- B. Include all required warranties and bonds in the Operations and Maintenance Manuals in accordance with Item 2.04 herein.
- C. List Subcontractor, supplier and manufacturer, with address and telephone number of responsible principles.
- D. Verify that documents are in proper form, contain all information, and are notarized as applicable.
- E. Co-execute documents as required.

2.06 TRAINING

- A. The Contractor shall coordinate with the Owner's Authorized Representative training sessions for all equipment and systems in accordance with OUS General Conditions for public Improvement Contract Section K.5.

2.07 SPARE PARTS & EXTRA QUANTITIES

- A. The Contractor shall provide spare parts and extra quantities in accordance with OUS General Conditions for public Improvement Contract Section K.6.
- B. The Contractor shall submit in accordance with Division 1 Section 01300 Item 3.01, five (5) copies of the following:
 - 1. Check off sheets for the review of each item of material or product for which extra quantities are required.
 - 2. Each check off sheet shall provide the following information:
 - 1) Project information required by Division 1, Section 01300, Item 1.05.
 - 2) Product information required by Division 1, Section 01300, Item 3.06.
 - 3) Amount of extra parts or quantity required.
 - 4) Provide spaces for testing "Review" sign off by Owner's Authorized Representatives and the Architect's Authorized Representative.
- C. Coordinate delivery to the Owner with the Owner's Authorized Representative and submit receipts of delivery corresponding to spare parts and extra quantities check off sheet.

2.08 PROJECT RECORD DOCUMENTS

- A. Submit three (3) copies of the Project Record Documents for review in accordance with Division 1 Section 01300 Item 3.01. The Project Record Documents shall be organized to include the following information:
 - 1. Title and date of Project, Owner's Project Number
 - 2. Table of Contents
 - 3. Specifications
 - 4. As-Built Drawings (blueprints or photocopies)
 - 5. Inspection Reports, as applicable
 - 6. Warranty(ies), as applicable
 - 7. Operations and Maintenance Instructions
 - 8. Approved and stamped Shop Drawings, Product Data and Samples (Provide 1 set of reproducible copies for Owner's file, in Microsoft Word or AutoCAD 2000 electronic formats, or on 3 MIL thick double sided and toothed Mylar.)
- B. Bind each copy of the Project Record Documents in a black, hard cover, three-ring binder with each Section clearly indexed with tabbed divider pages.
- C. The project team list shall include the address and phone number of the Owner, Architect,

Contractor, inspectors, subcontractors, and the materials manufacturers.

- D. Legibly mark each Specification Section to indicate actual as-built conditions. The as-built Specifications shall clearly indicate changes in the Work made by Addendum(a) and/or Change Order(s), actual materials used, and actual Manufacturer(s) used.
 - E. Legibly mark the drawings to indicate actual "as-built conditions." The drawings shall clearly indicate changes in the Work made by Addendum(a) and/or Change Order(s). The Owner shall employ the Architect to modify CAD documents into a "recorded as-built" base for Owner's usage, based on information provided by Contractor.
 - F. Include inspection reports and Architect's field reports, if applicable.
 - G. Include a copy of required Warranty(ies) clearly marked to identify the Owner's responsibilities under the terms of the Warranty(ies).
- 1.03 Make corrections to all Project Record Documents and resubmit as part of Final Completion Review.
- 1.04 RECORD DOCUMENTS
- A. Contact the Owner's Authorized Representative for a sample of acceptable Record Documents if needed.

PART 3 - PREREQUISITES TO FINAL COMPLETION AND PAYMENT

- 3.01. The Contractor shall comply with all terms of OUS General Conditions for Public Improvement Contract Sections E.6 and I.1, unless otherwise amended herein, prior to filing Notice of Final Completion or requesting Final Payment.
- 3.02. The Contractor shall return all keys requested for access to buildings and work areas and obtain a deposit refund, as specified in Division 1, Section 01040, Item 1.09.
- 3.02. The Contractor shall notify all Subcontractors in writing of incomplete and/or incorrect items and the anticipated filing of Final Completion. Notify far enough in advance of the completion date that the Work can be completed on schedule. Said Work shall be immediately corrected.
- 3.03. Submit to the Owner's Authorized Representative Lien Releases in accordance with OUS General Conditions for Public Improvement Contract Section K.8.
- 3.04. The Contractor shall provide the Owner with an unconditional Certificate of Occupancy from the local building officials, in accordance with OUS General Conditions for Public Improvement Contract Section K.8.
- 3.05. Notify the Architect in writing that all items are complete and ready for Final Completion review and that the Work product is fully usable.

- 3.06. Submit three (3) copies of all record documents for Final Completion review at this time.
- 3.07. The Architect will review all documents. The Architect will review all Work that has been certified as complete to the best knowledge of the Contractor. The Architect will also list all remaining incomplete punchlist Work and assign a probable value and time to complete such uncompleted Work.
- 3.08. The Architect will review the Work for conformance. Time is of an essence on this project. If the Work is found to be in nonconformance, the Architect will notify the Owner of the nonconforming items and probable value and time for completion. Nonconforming items will require retainage of monies to ensure that the Contractor will complete all Work within the time established by the Public Improvement Agreement and as amended by executed Change Orders.
- 3.09. The Contractor shall make the required corrections to the Work expeditiously. Sufficient retainage monies will be held to pay for uncompleted Work, should the Contractor fail to perform. A letter will be addressed to the Contractor noting the project status and the monies available for a partial-final payment upon receipt of billing.
- 3.10. When Contract closeout procedures are completed and all Punchlist deficiencies have been corrected, final acceptance by the Owner will be documented. The Contractor will receive written notice of acceptance of the Work and notification that final payment may be billed and released. Note that final wage rate submittal and documentation of all BOLI fees are required prior to final payment.
- 3.11. The Contractor shall be responsible for all parking citations received in relation with the project from the City of Portland and the Portland State University office of Transportation and Parking. All citations must be paid prior to submission of notice of Final Completion and Request for final Payment.
- 3.12. All warranties shall commence and become effective in accordance with Section I of the OUS General Conditions for Public Improvement Contracts and as modified by OUS Supplemental General Condition SG-6.

PART 4 - PRODUCTS

NOT USED

PART 5 - EXECUTION

NOT USED

END OF SECTION

Portland State University
Abatement Specifications

PART 1 - GENERAL REQUIREMENTS - ASBESTOS ABATEMENT - CLASS I-IV

1.1 DESCRIPTION OF WORK

A. This section describes the removal and disposal of asbestos containing materials (ACMs). Class I through Class IV asbestos abatement are covered in this section.

1.2 REFERENCE STANDARDS AND DOCUMENTS

A. Code of Federal Regulations 29 CFR 1926.1101 Asbestos Abatement

B. Code of Federal Regulations 29 CFR 1910.1001 General Industry; Asbestos

C. US Environmental Protection Agency "National Emissions Standards For Hazardous Air Pollutants" (NESHAP) CFR 40 Part 61 Subparts A and M

D. US Environmental Protection Agency "Asbestos Hazard Emergency Response Act" (AHERA) CFR 40 Part 763 Subpart E.

E. Oregon Administrative Rules, Chapter 340, Division 25, Department of Environmental Quality, Asbestos Abatement Requirements.

F. Oregon Administrative Rules, Chapter 340, Division 33, License and Certification Requirements.

G. Oregon Administrative Rules, Chapter 437, Division 2, General Occupational Safety and Health Rules.

H. Oregon Administrative Rules, Chapter 437, Division 03, Construction

1.3 DEFINITIONS

A. ACM: means asbestos containing material.

B. AHERA Building Inspector: means a person who has successfully completed the training requirements for a building inspector established by EPA Asbestos Model Accreditation Plan; Interim Final Rule (40 CFR Part 763, Appendix C to Subpart E, I.B.3) and whose certification is current.

C. AHERA Project Designer: means a person who has successfully completed the training requirements for an asbestos abatement project designer established by EPA regulations (40 CFR 763.90(g)) and whose certification is current.

D. Air Monitoring Professional: means a qualified individual with responsibility for the supervision of, or collection of air samples inside and outside the project area. This individual shall not be affiliated with the contractor in any way.

E. Amended Water: means water to which a surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM

F. Asbestos: includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that have been chemically treated and/or altered. This includes suspect and/or presumed ACM.

G. Asbestos Containing Material (ACM): means any material containing more than one percent asbestos.

H. Asbestos Survey: means a written report describing an inspection using the procedures contained in EPA regulations (40 CFR 763,86) to determine whether materials or structures to be worked on, renovated, removed, or demolished (including materials on the outside of structures) contain asbestos.

I. Authorized Person: means any person authorized by the employer and required by work duties to be present in regulated areas.

J. Class I asbestos work: means activities involving the removal of Thermal System Insulation and surfacing ACM and presumed ACM.

K. Class II asbestos work: means activities involving the removal of ACM which is not thermal system insulation or surfacing material. Including, but not limited to; wallboard, floor tile and sheeting, roofing, and siding shingles, cementitious pipe and construction mastics.

L. Class III asbestos work: means repair and maintenance operations, where "ACM", including thermal system insulation and surfacing material, is likely to be disturbed M. Class IV asbestos work: means maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM or PACM.

N. Clean Room: means an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

O. Clearance: means visual inspection and air monitoring demonstrating that an area is acceptable to return to the owner.

P. Competent Person: means a person capable of identifying asbestos hazards, selecting appropriate control strategies and having the authority to take prompt corrective measures. Additionally, for Class I and Class II work, one who is specially trained in a training course meeting the criteria of EPA's Model Accreditation Plan (40 CFR 763) for project designer or supervisor, or its equivalent and, for Class II work, who is trained in an operations and Maintenance O & M Course developed by EPA (40 CFR 76392 (a) (2)).

Q. Contractor: means the asbestos abatement contractor.

R. Critical Barrier: means one or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

S. Decontamination Area: means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

T. Equipment room (change room): means a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

U. Friable Asbestos Containing Material: means asbestos containing material that can be crumbled, pulverized or reduced to powder when dry, by hand pressure.

V. Glovebag: means an impervious plastic bag-like enclosure affixed around an asbestos containing material, with glove like appendages through which material and tools may be handled.

W. High-Efficiency Particulate Air (HEPA) Filter: means a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

X. Intact: means that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that it's no longer likely to be bound within its matrix.

Y. NESHAPs: means National Emission Standard for Hazardous Air Pollutants, 40 CFR part 61.

Z. NPE: means Negative Pressure Enclosure.

AA. OSHA: means 29 CFR 1926.1101 Asbestos Abatement.

BB. Owner: means the legal entity, including a lessee, which exercises control over management and record keeping functions relating to a building and/or facility in which the abatement activities described in this document take place.

CC. Owners Representative: means a person authorized by the Owner to act in the Owners behalf.

DD. Presumed Asbestos Containing Material (PACM): means thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as PACM may be rebutted through PLM analysis of samples obtained by certified inspectors.

EE. Pre-Abatement Samples: means air samples taken to determine the concentration of airborne asbestos in an area prior to abatement activities.

FF. Project Designer: means a person who has successfully completed the training requirements for an abatement project designer established by 40 USC. 763.90 (g).

GG. Regulated Area: means an area established by the employer to demarcate areas where Class I and Class II asbestos work is conducted and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

HH. Removal: means all operations where ACM and/or PACM is taken out or stripped from structures or substrate, and includes demolition operations.

II. Surfacing Material: means material that is sprayed, troweled-on or otherwise applied to surfaces.

JJ. Suspect ACBM: means material that is suspected of containing asbestos that has not been sampled and analyzed for asbestos content.

KK. Thermal System Insulation: means ACM applied to pipes, fittings, boilers, breaching, tanks, ducts or other structural components to prevent heat loss or gain.

1.4 GENERAL REQUIREMENTS

- A. Activities shall be coordinated with the Owner and pursued in the manner described by the contractor's approved Work Plan.
- B. The section applies to Class I through Class IV Abatement unless changes are made in writing by the Owner.
- C. The Owner will be responsible for all air monitoring.
- D. Contractors shall verify to their satisfaction the nature of the work described in this specification.
- E. The Asbestos Abatement Contractor is responsible for all regulatory notifications including; Department of Environmental Quality, Local Air Pollution Control Agencies and the local Fire Chief per 1994 Uniform Fire Code, Section 8707. Copies must be submitted to the Owner prior to the start of the work.
- F. The Contractor may request asbestos abatement engineering control variances. All variance requests and approvals must be in writing from appropriate agencies and submitted with the work plan.
- G. All asbestos work will be completed in accordance with the latest interpretation of all applicable laws and regulations. Ignorance of any regulation does not relieve the Contractor of the responsibility to comply with those regulations.
- H. Whenever unknown or unusual conditions are discovered which may affect the project the Contractor shall immediately notify the Owner.
- I. The Contractor must have a competent person outside of the containment at all times while abatement activities are taking place.
- J. If at any time the Owner determines that the Contractors practices are in violation of any section of this specification, or are endangering workers or the facility the Owner will notify the contractor orally of the violation or danger. The contractor shall immediately correct the deficiency or a stop work order may be issued by the Owner.
- K. On receipt of a stop work order, work cannot be restarted without written authorization of the Owner.
- L. All costs and/or delays associated with a stop work order are to be borne by the Contractor and cannot be used as a basis for an increase in the contract amount or extension of time.
- M. No odor solvents may be used on a pre - approved basis only.

1.5 SUBMITTALS

- A. Prior to the start of the Work, the Contractor shall submit the following documents:
1. Worker certifications.
 2. Medical releases.
 3. Respirator fit tests.
 - 4 Respiratory protection program including:

- a. Filter changes.
 - b. Skin protection.
 - c. Medical examinations.
 - d. Respirator fit testing - frequency and methods (qualitative and quantitative methods).
 - e. Program director.
 - f. Cleaning and storage of respirators.
 - g. Availability of replacement parts.
5. Regulatory notifications.
 6. 24 hr. emergency phone list.
 7. A complete project work plan presented with critical paths.

PART 2 - PRODUCTS

2.1 MATERIAL

A. Protective Clothing:

1. The Contractor shall provide and require the use of protective clothing such as coveralls or similar whole body clothing, head covering, gloves and foot covering for any employee exposed to airborne concentrations of asbestos that exceed the PEL and/or Excursion Limit. Protective clothing will always be required on Class I through Class IV projects.
2. The Contractor shall ensure that laundering of contaminated clothing is done in a manner that prevents release of asbestos and that if the contaminated clothing is given to another person for laundering that that person is informed of requirements to prevent release of asbestos in laundering.
3. Contaminated clothing shall be transported in impermeable bags or other closed impermeable container, and be labeled as asbestos containing with appropriate cautions printed on the label.
4. The competent person shall ensure that work suits worn by employees are not ripped or torn by means of visual inspection at least once per shift.
5. When rips or tears are detected the suit shall be immediately repaired or replaced.

B. Additional Protective Equipment:

1. The Contractor shall provide and require the use of any additional protective equipment as required by OSHA standards such as hard hats, eye protection and hearing protection on Class I through Class IV projects.

C. Respirator Selection:

1. Where respirators are required the Contractor shall select and provide, at no cost to the employees, the appropriate respirator and cartridges, and shall ensure that the employees use the respirator provided correctly.
2. The Contractor shall select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR part 11.
3. The Contractor shall provide a tight fitting powered, air-purifying respirator in lieu of any negative pressure respirator specified whenever:
 - a. An employee chooses this type of respirator and,
 - b. This respirator will provide adequate protection of the employee.

2.2 EQUIPMENT

A. All equipment and tools necessary to completion of the asbestos abatement work are to be supplied by the Contractor (refer to Part 3 - Execution). The equipment must be maintained in good working condition and is subject to the Owner's review.

PART 3 - EXECUTION

3.1 CLASS I ABATEMENT - GENERAL PROCEDURES

- A. All Class I work is to comply with 29 CFR 1926.1101 with Appendix F as mandatory.
- B. All Class I work, including the installation and operation of the control system shall be supervised by a competent person as shown in definitions.
- C. HVAC systems shall be isolated in the regulated area by sealing with a double layer of 6 mil plastic or the equivalent.
- D. Walls are to be covered with a minimum of two layers of 4 mil. plastic.
- E. Impermeable drop cloths shall be placed on surfaces beneath all removal activities. At a minimum a double layer of 6 mil. plastic with a tear sheet removed at end of shift and replaced prior to the start of the next shift shall be used.
- F. All objects within the regulated area shall be covered with impermeable drop cloths or plastic sheeting which is secured by duct tape or the equivalent.
- G. Doors, windows or other barriers are to be covered with double layer of 4 mil. plastic.
- H. Critical barriers shall be placed over all openings to the regulated area.
- I. The regulated area is to be demarcated with signs at all times.
- J. A three stage entry/exit system shall be used at all times during Class I asbestos removal. The three stages shall consist of: a clean change room, shower room and equipment room.
- K. Water generated in the shower room is to be disposed of as ACM or filtered to a demonstrable level acceptable with local standards.

L. Bagged material shall be removed from containment through a two stage bag-out chamber. At the final chamber the ACM bag (yellow) is to be washed and then enclosed with a clear bag and the top made air tight prior to removal from the bag-out chamber.

M. Operations shall proceed in accordance with the following requirements:

1. Isolating the work area as full containment:

a. Construct the containment with at least two layers of 4 mil. plastic walls and ceiling. The floor of the containment shall be constructed with at least two layers of 6 mil. plastic and one 6 mil. tear sheet.

b. Construct a three stage decontamination and a two stage waste bag-out unit separate from each other and contiguous with the containment.

c. Lock out/tag out of HVAC and electrical service to the area shall be coordinated with the Owner or owner's representative.

d. The negative pressure HEPA filtration units are to be exhausted outside of the building.

e. All portions of the containment, decontamination unit, bag-out units, negative pressure HEPA filtration units and HEPA exhaust tubing exposed to the Owners Personnel are to be hard sided enclosures made secure from the possibility of tampering.

f. Manometric instruments shall be utilized at all times demonstrating a minimum of -0.02 column inches of water pressure differential.

g. Perform the necessary asbestos abatement defined in the Owners Scope of Work.

h. The asbestos material shall be sprayed with amended water. A fine spray of this solution shall be applied to materials to be abated to prevent fiber release preceding the removal of the asbestos material. Abatement shall not begin until the asbestos material is sufficiently saturated to prevent emission of airborne fibers.

i. Remove asbestos material while damp and pack in 6 mil, labeled, plastic bags or plastic lined and labeled drums. Wash the outside surfaces of each and place inside of a second bag bearing EPA and DOT warning labels. Place double bagged material in a secure temporary storage location until it is transported to an approved landfill. Provide space for commercial disposal bin. Disposal bin will be in a secure area or must be lockable.

j. The Contractor will maintain the work areas free of accumulated asbestos materials at all times and will keep materials wet until they are enclosed in sealed plastic bags.

k. Waste water resulting from all operations shall be filtered with a 5-micron pore size filtration system prior to re-use or disposal. To the extent feasible, filtered waste water will be re-claimed and used on-site for application in wet method work practices. Filters shall be changed as necessary to achieve this objective. Provide units with disposable filter elements as indicated below. Connect so that discharged water passes primary filter and the output of primary filter passes

through secondary filter. Primary Filter: Pass particles 20 microns and smaller.
Secondary Filter: Pass particles 5 microns and smaller.

l. Pump filtered water to a temporary storage container. Filtered water may be used for amended water to reduce stored quantities. Used water filters shall be removed, packed and prepared for disposal. If contaminated water leaks from the work area, the Contractor will wet clean and/or HEPA vacuum the affected area and promptly notify the Owner or Owner's Representative.

m. Dispose of filtered water as allowed by local regulations.

3.2 CLASS I ABATEMENT - HYGIENE FACILITIES & PRACTICES

A. Decontamination areas: the Contractor shall establish a decontamination area that is adjacent and connected to the regulated area for decontamination of the Contractor's personnel. The decontamination area shall consist of an equipment room, shower area, and clean room in series. The Contractor shall ensure that employees enter and exit the regulated area through the decontamination area. The decontamination area shall remain under negative pressure for the duration of the project.

1. Equipment room: The equipment room shall be supplied with impermeable labeled bags for disposal of contaminated protective equipment.

2. Shower area: Shower facilities shall be provided unless the Contractor can demonstrate that they are not feasible. The shower will be adjacent both to the equipment room and the clean room. Where the Contractor can demonstrate that it is not feasible to locate the shower between the equipment room and the clean room, or where the work is performed outdoors, the Contractor shall ensure that employees:

a. Remove asbestos contamination from their work suits in the equipment room using a HEPA vacuum before proceeding to a shower that is not adjacent to the work area; or

b. Remove their contaminated work suits in the equipment room, then don clean work suits, and proceed to a shower that is not adjacent to the work area.

3. Clean Change Room. The clean room shall be equipped with a locker or appropriate storage container for each Contractor's personnel use. When the Contractor can demonstrate that it is not feasible to provide a clean change area adjacent to the work area or where the work is performed outdoors, the Contractor may permit personnel engaged in Class I asbestos jobs to clean their protective clothing with a portable HEPA equipped vacuum before Contractor personnel leave the regulated area. Such Contractor personnel however, must then change into street clothing in clean change areas provided by the Contractor which otherwise meets the requirements of this section.

B. Decontamination area entry procedures.

1. The Contractor shall ensure that employees:

a. Enter the decontamination area through the clean room.

b. Remove and deposit street clothing within a locker provided for their use

c. Put on protective clothing and respiratory protection before leaving the clean room.

d. Before entering the regulated area, the Contractor shall ensure that employees pass through the equipment room.

C. Decontamination area exit procedure.

1. The Contractor shall ensure that:
 - a. Before leaving the regulated area, Contractor's personnel shall remove all gross contamination and debris from their protective clothing.
 - b. Contractor's personnel shall remove their protective clothing in the equipment room and deposit clothing in labeled impermeable bags or containers.
 - c. Personnel shall not remove their respirators in the equipment room.
 - d. Personnel shall shower prior to entering the clean room.
 - e. After showering employees shall enter the clean room before changing into street clothes.

D. Lunch Areas - whenever food or beverages are consumed at the work site where personnel are performing Class I asbestos work, the Contractor shall provide lunch areas where the airborne concentrations of asbestos are below the permissible exposure limit and/or excursion limit.

E. Hygiene Facilities and Practices for Class I work involving less than 25 linear or 10 square feet of TSI or surfacing materials and for Class II work where exposures exceed the PEL.

1. The Contractor shall establish an equipment room or area that is adjacent to the regulated area for the decontamination of personnel and their equipment which is contaminated with asbestos which shall consist of an area covered with an impermeable drop cloth on the floor or horizontal working surface.
2. The area must be of sufficient size to accommodate cleaning of equipment and removing personal protective equipment without spreading contamination beyond the area.
3. Work clothing must be decontaminated with a HEPA vacuum before it is removed.
4. All equipment and surfaces of containers filled with ACM must be cleaned prior to removing them from the equipment room or area.
5. The Contractor shall ensure that employees enter and exit the regulated area through the equipment room.

3.3 CLASS I ABATEMENT - RESPIRATORY PROTECTION

A. Respiratory Protection - All Classes

1. During all Class I projects.
2. During all Class II through Class IV projects where the material is not removed substantially intact.
3. During all Class II through Class IV projects which are not performed using wet methods.
4. During all work covered by this specification where employees are exposed above the PEL or Excursion Limit.

5. In emergencies.

3.4 CLASS I ABATEMENT - NEGATIVE PRESSURE ENCLOSURE

A. Specifications

1. The Negative Pressure Enclosure (NPE) may be of any configuration.
2. The Contractor shall provide a 12 inch by 24 inch clear plastic viewing port on all negative pressure enclosures.
3. Emergency exits shall be marked on the inside of the containment to guide workers out in the event of an emergency.
4. At least 4 air changes per hour shall be maintained in the NPE.
5. A minimum of -0.02 column inches of water pressure differential, relative to outside pressure, shall be maintained within the NPE as evidenced by manometric measurements.
6. The NPE shall be kept under negative pressure throughout the period of its use.
7. Air movement shall be directed away from employees performing asbestos work within the enclosure, and toward a HEPA filtration or collection device.

B. Work Practice

1. Before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breaches and smoke tested for leaks, and any leaks are to be sealed.
2. Electrical circuits in the enclosure shall be deactivated, unless equipped with ground-fault circuit interrupters.

C. Operations shall proceed in accord with the following requirements:

1. Isolating the work area as full containment:
 - a. Construct the containment with at least two layers of 4 mil. plastic walls and ceiling. The floor of the containment shall be constructed with at least two layers of 6 mil. plastic and one 6 mil. tear sheet.
 - b. Construct a three stage decontamination and a two stage waste bag-out unit separate from each other and contiguous with the containment.
 - c. Lock out/tag out of HVAC and electrical service to the area shall be coordinated with the Owner.
 - d. The negative pressure HEPA filtration units are to be exhausted outside of the building.
 - e. All portions of the containment, decontamination unit, bag-out units, negative pressure HEPA filtration units and HEPA exhaust tubing exposed the Owners Personnel are to be hard sided enclosures made secure from the possibility of tampering.

f. Perform the necessary asbestos abatement defined in the Owners Scope of Work.

g. The asbestos material shall be sprayed with amended water. A fine spray of this solution shall be applied to materials to be abated to prevent fiber release preceding the removal of the asbestos material. Abatement shall not begin until the asbestos material is sufficiently saturated to prevent emission of airborne fibers.

h. Remove asbestos material while damp and pack in 6 mil, labeled, plastic bags or plastic lined and labeled drums. Wash the outside surfaces of each and place inside of a second bag bearing EPA and DOT warning labels. Place double bagged material in a secure temporary storage location until it is transported to an approved landfill. Provide space for commercial disposal bin. Disposal bin will be in a secure area or must be lockable.

i. The Contractor will maintain the work areas free of accumulated asbestos materials at all times and will keep materials wet until they are enclosed in sealed plastic bags.

j. Waste water resulting from all operations shall be filtered with a 5-micron pore size filtration system prior to re-use or disposal. To the extent feasible, filtered waste water will be re-claimed and used on-site for application in wet method work practices. Filters shall be changed as necessary to achieve this objective. Provide units with disposable filter elements as indicated below. Connect so that discharged water passes primary filter and output of primary filter passes through secondary filter. Primary Filter: Pass particles 20 microns and smaller. Secondary Filter: Pass particles 5 microns and smaller.

k. Pump filtered water to a temporary storage container. Filtered water may be used for amended water to reduce stored quantities. Used water filters shall be removed, packed and prepared for disposal. If contaminated water leaks from the work area, the Contractor will wet clean and/or HEPA vacuum the affected area and promptly notify the Owner or Owners Representative.

l. Dispose of filtered water as allowed by local regulations

2. Post Abatement Cleaning in Isolated Work Areas: See Cleanup and Clearance Section

3.18

a. Upon completion of gross removal in the work area, remove visible accumulations of asbestos material, dust and debris.

b. Clean all surfaces in the work area and any other contaminated areas with water and/or with HEPA filtered vacuum equipment. Sealed containers and equipment shall be included in the clean-up and shall be removed from work area after decontamination of the outer surfaces.

c. After final cleaning is completed, the Owner or Owners Representative will conduct a visual inspection of the work area before encapsulation. If the visual inspection is satisfactory, the Contractor will apply penetrating encapsulant to all surfaces in the enclosure.

d. After encapsulation has been completed, the work area will be allowed to dry sufficiently and aggressive clearance air samples will be taken unless waived by the Owner or Owners Representative.

D. The Contractor may request asbestos abatement engineering control variances. All variance requests and approvals must be in writing, from appropriate agencies and submitted with the work plan.

3.5 CLASS I ABATEMENT – GLOVEBAGS

- A. Glovebags shall be made of 6 mil. thick plastic and shall be seamless at the bottom.
- B. The area to be glovebagged shall be pre-cleaned by wet methods and HEPA vacuuming prior to the installation of the glovebag.
- C. Each glovebag shall be installed so that it completely covers the circumference of pipe or other structure where the work is to be completed.
- D. Glovebags are to be smoke tested for leaks and any leaks sealed prior to use.
- E. Glovebags shall not be used on surfaces whose temperature exceeds 150 degrees F.
- F. Glovebags may be used only once and may not be moved.
- G. Prior to disposal, glovebags shall be collapsed by removing air within them using a HEPA vacuum.
- H. Before beginning the operation, loose and friable material adjacent to the glovebag shall be wrapped and sealed in two layers of 6 mil. plastic or otherwise rendered intact.
- I. Where the system uses attached waste bag, such bag shall be connected to collection bag using hose or other material which shall withstand pressure of ACM waste and water without losing its integrity.
- J. Sliding valve or other device shall separate waste bag from hose to ensure no exposure when waste bag is disconnected.
- K. At least two persons shall perform Class I glovebag removals.
- L. The HEPA vacuum cleaner or device used to provide negative pressure to the glovebag shall run continuously throughout the operation.
- M. Glovebag Removal Outside of a Negative Pressure Enclosure, using the Negative Air Glovebag Method:
 - 1. Provide a negative pressure three stage decontamination unit to be used for remote decontamination of workers.
 - 2. Isolate and prepare the work area (regulate).
 - 3. Coordinate the shut off all heat sources to objects to be worked on with the Owner.
 - 4. Workers shall be fully protected with respirators and two layers of protective clothing from immediately prior to the first disturbance of asbestos-containing or contaminated material until the time final clean-up is completed.
 - 5. Pre-clean the work area, as directed by the Owner or Owners Representative, (using HEPA vacuums or wet cleaning methods as appropriate) prior to installing glove bags.

6. Cover the floor of the work area with two layers of 6 mil plastic.
7. All removal using the glove bag method shall be performed strictly according to the manufacturer's printed instructions and applicable regulations. After the removal is completed within the glove bag, all visible debris shall be cleaned from abated surfaces and the bag's upper chamber shall be thoroughly washed. All surfaces located within the bag's upper portion shall receive an application of penetrating encapsulant.
8. Encapsulate the ends of any remaining asbestos insulation. Whenever rewettable lagging cloth is used it shall extend a minimum of 6" back over the existing insulation.
9. Using a HEPA filtered vacuum, remove all contaminated air in the upper chamber before removing the glovebag.
10. Promptly double-bag the used glove bag after removal is complete, place into sealed container, and remove to the bag holding area.
11. In case of a spill or if air analysis indicates a fiber count in excess of maximum allowable limits, follow procedures set forth in this section. In addition, the workers shall follow the decontamination procedures for isolated areas, and change into clean protective clothing. All such incidents shall be promptly reported to the Owner or Owners Representative.
12. A visual inspection of the work area will be conducted by the Owner or Owners Representative.
13. The glove bag workers shall decontaminate themselves promptly each time they leave the work area such as prior to lunch, or the end of the work shift.

3.6 CLASS II ABATEMENT - GENERAL PROCEDURES

- A. All Class II work, including the installation and operation of the control system shall be supervised by a competent person as shown in definitions.
- B. For all indoor Class II projects Contractor shall use one of the following methods to ensure that airborne asbestos does not migrate from the regulated area.
 1. Critical barriers shall be placed over all openings to the regulated area.
 2. The Contractor shall use another barrier or isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area monitoring or clearance monitoring that equals pre-abatement air monitoring or ambient air monitoring whichever is more restrictive but, in no case is the Contractor required to exceed 0.01 f/cc as minimum
- C. Two layers of impermeable drop cloths shall be placed on all surfaces beneath all removal activity.
- D. HVAC systems shall be shutdown or isolated in the regulated area by sealing with a double layer of 6 mil plastic or the equivalent.
- E. All objects within the regulated area shall be covered with two layers of impermeable drop cloths or plastic sheeting which is secured by duct tape or the equivalent.

- F. Critical barriers shall be placed over all openings to the regulated area.
- G. The regulated area is to be demarcated with signs at all times.
- H. A three stage entry/exit system shall be used at all times during this Class II asbestos removal. The three stages shall consist of: a clean change room, shower room and equipment room.
- I. Water generated in the shower room is to be disposed of as ACM or filtered to a demonstrable level acceptable with local standards.
- J. All portions of the decontamination unit, bag-out units, negative pressure HEPA filtration units and HEPA exhaust tubing exposed to the Owners Personnel are to be placed in hard sided enclosures and made secure from the possibility of tampering.
- K. The asbestos material shall be sprayed with amended water. A fine spray of this solution shall be applied to materials to be abated to prevent fiber release preceding the removal of the asbestos material. Abatement shall not begin until the asbestos material is sufficiently saturated to prevent emission of airborne fibers. All excess water is to be captured for disposal.
- L. Remove asbestos material while damp and pack in 6 mil, labeled, plastic bags or plastic lined and labeled drums, or in strapped bundles; double wrapped and labeled. Wash the outside surfaces of each and place inside of a second bag bearing EPA and DOT warning labels. Place double bagged material in a secure temporary storage location until it is transported to an approved landfill. Provide a commercial disposal bin. Disposal bin will be in a secure area or must be lockable.
- M. The Contractor will maintain the work areas free of accumulated asbestos materials at all times and will keep materials wet until they are enclosed in sealed plastic bags.
- N. Waste water resulting from all operations shall be filtered with a 5-micron pore size filtration system prior to re-use or disposal. To the extent feasible, filtered waste water will be re-claimed and used on-site for application in wet method work practices. Filters shall be changed as necessary to achieve this objective. Provide units with disposable filter elements as indicated below. Connect so that discharged water passes primary filter and output of primary filter passes through secondary filter.
1. Primary Filter: Pass particles 20 microns and smaller.
 2. Secondary Filter: Pass particles 5 microns and smaller.
- O. Pump filtered water to a temporary storage container. Filtered water may be used for amended water to reduce stored quantities. Used water filters shall be removed, packed and disposed of. If contaminated water leaks from the work area, the Contractor will wet clean and/or HEPA vacuum the affected area and promptly notify the Owner or Owners Representative.

3.7 CLASS II ABATEMENT - HYGIENE FACILITIES & PRACTICES

A. Decontamination areas: the Contractor shall establish a decontamination area that is adjacent and convenient to the regulated area for decontamination of employees. The decontamination area shall consist of an equipment room, shower area, and clean room in series. The Contractor shall ensure that employees enter and exit the regulated area through the decontamination area. The decontamination area shall remain under negative pressure for the duration of the project.

1. Equipment room: The equipment room shall be supplied with impermeable labeled bags for the disposal of contaminated protective equipment.

2. Shower area: Shower facilities shall be provided unless the Contractor can demonstrate that they are not feasible. The shower will be adjacent both to the equipment room and the clean room. Where the Contractor can demonstrate that is not feasible to locate the shower between the equipment room and the clean room, or where the work is performed outdoors, the Contractor shall ensure that employees:

a. Remove asbestos contamination from their work suits in the equipment room using a HEPA vacuum before proceeding to a shower that is not adjacent to the work area: or

b. Remove their contaminated work suits in the equipment room, then don clean work suits, and proceed to a shower that is not adjacent to the work area.

3. Clean Change Room. The clean room shall be equipped with a locker or appropriate storage container for each employee's use. When the Contractor can demonstrate that it is not feasible to provide a clean change area adjacent to the work area or where the asbestos jobs to clean their protective clothing with a portable HEPA-equipped vacuum before such employees leave the regulated area. Such employees however, must then change into street clothing in clean change areas provided by the Contractor which otherwise meets the requirements of this section.

B. Decontamination area entry procedures. The Contractor shall ensure that employees:

1. Enter the decontamination area through the clean room.
2. Remove and deposit street clothing within a locker provided for their use; and
3. Put on protective clothing and respiratory protection before leaving the clean room.
4. Before entering the regulated area, the employer shall ensure that employees pass through the equipment room.

C. Decontamination area exit procedure. The Contractor shall ensure that:

1. Before leaving the regulated area, employees will be expected to carefully vacuum debris from their protective clothing and dispose of outer garments.
2. Employees will then don a clean set of protective clothing, wet wipe the outside of the respirator and immediately proceed to the decon facility.
3. Workers are not to remove respirators until they reach the shower of the decon where respirators will be cleaned and disinfected.
4. The worker will then undergo a complete warm water shower with soap.
5. Once showering is complete the worker will proceed to a clean room where respirators are stored and clean clothing is available.

D. Lunch Areas: Whenever food or beverages are consumed at the work site where employees are performing Class II asbestos work, the employer shall provide lunch areas in which the airborne concentrations of asbestos are below the permissible exposure limit and/or excursion limit.

3.8 CLASS II ABATEMENT - RESPIRATOR PROTECTION

A. Respiratory Protection - All Classes

1. During all Class I projects.
2. During all Class II through IV projects where the material is not removed substantially intact.
3. During all Class II through IV projects, which is not performed using wet methods.
4. During all work covered by this specification where employees are exposed above the PEL or Excursion Limit.
5. In emergencies.

3.9 CLASS II ABATEMENT - NEGATIVE PRESSURE ENCLOSURE

A. Specifications

1. The Negative Pressure Enclosure (NPE) may be of any configuration.
2. The Contractor shall provide a 12 inch by 24 inch clear plastic viewing port on all negative pressure enclosures.
3. Emergency exits shall be marked on the inside of the containment to guide workers out in the event of an emergency.
4. At least 4 air changes per hour shall be maintained in the NPE.
5. A minimum of -0.02 column inches of water pressure differential, relative to outside pressure, shall be maintained within the NPE as evidenced by manometric measurements.
6. The NPE shall be kept under negative pressure throughout the period of its use.
7. Air movement shall be directed away from employees performing asbestos work within the enclosure, and toward a HEPA filtration or collection device.

B. Work Practices

1. Before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breeches and smoke tested for leaks, and any leaks are to be sealed.
2. Electrical circuits in the enclosure shall be deactivated, unless equipped with ground-fault circuit interrupters.

C. Operations shall proceed in accord with the following requirements:

1. Isolating the work area as full containment:
 - a. Construct the containment with at least two layers of 4 mil. plastic walls and ceiling. The floor of the containment shall be constructed with at least two layers of 6 mil. plastic and one 6 mil. tear sheet.
 - b. Construct a three stage decontamination and a two stage waste bag-out unit separate from each other and contiguous with the containment.

- c. Lock out/tag out of HVAC and electrical service to the area shall be coordinated with the Owner or Owners Representative.
- d. The negative pressure HEPA filtration units are to be exhausted outside of the building.
- e. All portions of the containment, decontamination unit, bag-out units, negative pressure HEPA filtration units and HEPA exhaust tubing exposed to The Owners Personnel are to be hard sided enclosures made secure from the possibility of tampering.
- f. Manometric instruments shall be utilized at all times demonstrating a minimum of -0.02 column inches of water pressure differential.
- g. Perform the necessary asbestos abatement defined in this Scope of Work.
- h. The asbestos material shall be sprayed with amended water. A fine spray of this solution shall be applied to materials to be abated to prevent fiber release preceding the removal of the asbestos material. Abatement shall not begin until the asbestos material is sufficiently saturated to prevent emission of airborne fibers.
- i. Remove asbestos material while damp and pack in 6 mil, labeled, plastic bags or plastic lined and labeled drums. Wash the outside surfaces of each and place inside of a second bag bearing EPA and DOT warning labels. Place double bagged material in a secure temporary storage location until it is transported to an approved landfill. Provide space for commercial disposal bin. Disposal bin will be in a secure area or must be lockable.
- j. The Contractor will maintain the work areas free of accumulated asbestos materials at all times and will keep materials wet until they are enclosed in sealed plastic bags.
- k. Waste water resulting from all operations shall be filtered with a 5-micron pore size filtration system prior to disposal. Filters shall be changed as necessary to achieve this objective. Provide units with disposable filter elements as indicated below. Connect so that discharged water passes primary filter and output of primary filter passes through secondary filter. Primary Filter: Pass particles 20 microns and smaller. Secondary Filter: Pass particles 5 microns and smaller.

2. Dispose of filtered water as allowed by local regulations.

3. Post Abatement Cleaning in Isolated Work Areas: See Cleanup and Clearance Section 3.18

- a. Upon completion of gross removal in the work area, remove visible accumulations of asbestos material, dust and debris.
- b. Clean all surfaces in the work area and any other contaminated areas with water and/or with HEPA filtered vacuum equipment. Sealed containers and equipment shall be included in the clean-up and shall be removed from work area after decontamination of the outer surfaces.
- c. After final cleaning is completed, the Owner, the Owner's Representative and the Contractor will conduct a visual inspection of the work area before

encapsulation. When the visual inspection is satisfactory, the Contractor will apply penetrating encapsulant to all surfaces in the enclosure.

d. After encapsulation has been completed, the work area will be allowed to dry sufficiently and aggressive clearance air samples will be taken. Aggressive air sampling may be waived by the Owner only.

D. The Contractor may request asbestos abatement engineering control variances. All variance requests and approvals must be in writing, from appropriate agencies and submitted with the work plan.

3.11 CLASS II ABATEMENT - CEMENT ASBESTOS BOARD (CAB)

A. Class II - Cementitious asbestos containing siding, shingles, transite panels, or pipe containing ACM.

1. Cutting, abrading or breaking siding, shingles, transite panels or pipe is prohibited unless the Contractor can demonstrate that methods less likely to result in asbestos fiber release cannot be used.
2. Each panel, shingle or length of pipe shall be sprayed with amended water prior to removal.
3. Panels, shingles or pipe which are neither bagged nor wrapped shall be immediately lowered to the ground via covered dust-tight chute, crane or hoist, or placed wrapped in a waste bag or in plastic sheeting and lowered to the ground no later than the end of shift.
4. Nails shall be cut with flat sharp instruments.
5. Transfer for disposal in a lined receptacle appropriately labeled.

3.12 CLASS I & II REGULATED AREAS

A. All Class I and Class II asbestos work shall be conducted within regulated areas

1. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne concentrations of asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs are to be provided and displayed at all times.

2. Warning signs that demarcate the regulated area shall be provided and displayed at each location where a regulated area is required. Signs shall be posted at such a distance from such a location that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. The warning signs required by this specification shall bear the following information:

DANGER
ASBESTOS CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTION CLOTHING ARE REQUIRED
IN THIS AREA

3. Access to regulated areas shall be limited to authorized persons.

4. All persons entering in a regulated area shall wear appropriate respiratory protection.
5. The Contractor shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area.
6. The Contractor shall ensure that a competent person directs all activities within a regulated area.

3.13 CLASS III ABATEMENT - GENERAL PROCEDURES

A. Class III asbestos work shall be conducted using engineering and work practice controls which minimize the exposure to employees performing the asbestos work and to bystander employees.

1. All Class III work including the installation and operation of the control system shall be supervised by a competent person as described in the training section 4.02.
2. The work shall be performed using wet methods.
3. To the extent feasible, the work shall be performed using local exhaust ventilation.
4. Where the disturbance involves drilling, cutting, chipping, abrading, sanding, breaking or sawing of thermal insulation or surfacing material, the employee shall use impermeable drop cloths, and shall isolate the operation using mini-enclosures or glove bag system.
5. If monitoring results show the PEL has been exceeded for this type of operation; the area shall be contained using impermeable barriers or their equivalent, or shall use an NPE as described under Class I or Class II abatement.

3.14 CLASS IV ABATEMENT - GENERAL PROCEDURES

A. Class IV asbestos work shall be conducted by trained employees at the direction of a competent person as described in section 4.02.

1. Class IV asbestos jobs shall be conducted using wet methods.
2. Class IV asbestos jobs shall utilize HEPA vacuums, and prompt clean up of debris containing ACM or PACM.
3. Employees cleaning up debris or waste in a regulated area where respirators are required shall wear respirators selected and used in compliance with the requirements for Class I asbestos abatement.
4. Employees who clean up waste or debris in a area where friable thermal system insulation or surfacing materials are present shall assume that such waste and debris contain asbestos.

3.15 TRANSPORTATION & DISPOSAL

A. Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of waste so that signs are visible. The markings must conform to the requirements as follows:

B. For all asbestos-containing waste material transported off the facility site:

1. The Contractor must maintain waste shipment records including the following:

- a. The name, address, and telephone number of the waste generator.
- b. The name and address of the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program.
- c. The approximate quantity in cubic meters (cubic yards).
- d. The name and telephone number of the disposal site operator.
- e. The name and physical site location of the disposal site.
- f. The date transported.
- g. The name, address, and telephone number of the transporter(s).
- h. A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

2. For all asbestos-containing waste material transported off the facility site, the Contractor must provide a copy of the waste shipment record to the disposal site owners or operators at the same time as the asbestos-containing waste material is delivered to the disposal site.

3. For waste shipments where a copy of the waste shipment record, signed by the owner or operator of the designated disposal site, is not received by the waste generator within 35 days of the date the waste was accepted by the initial transporter, contact the transporter and/or the owner or operator of the designated disposal site to determine the status of the waste shipment.

4. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator if a copy of the waste shipment record, signed by the owner or operator of the designated waste disposal site, is not received by the waste generator within 45 days of the date the waste was accepted by the initial transporter. Include in the report the following information:

- a. A copy of the waste shipment record for which a confirmation of delivery was not received.
- b. A cover letter signed by the waste generator explaining the efforts taken to locate the asbestos waste shipment and the results of those efforts.

5. Retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner or operator of the designated waste disposal site, for at least 2 years.

6. Furnish upon request, and make available for inspection all records required under this section.

3.16 PROHIBITIONS

A. The following work practices and engineering controls shall not be used for work related to asbestos or for work which disturbs ACM or PACM regardless of measured levels of asbestos exposure or the results of initial exposure assessments.

1. High-speed abrasive disk saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.
2. Compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.
3. Dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM or PACM.
4. Employee rotation as a means of reducing employee exposures to asbestos.

3.17 MAXIMUM ALLOWABLE FIBER CONCENTRATIONS

A. Maximum allowable fiber concentrations at any time regardless of respirator type:

1. Personnel Samples, inside containment 0.10 fibers/cc
2. Personnel Samples, EL inside containment 0.50 fibers/cc
3. Personnel Samples, outside containment 0.01 fibers/cc
4. Area samples, outside of work areas 0.01 fibers/cc
5. Area samples, inside isolated areas 0.10 fibers/cc
6. Glove bag removal 0.01 fibers/cc
7. Clearance samples (PCM) 0.01 fibers/cc
8. Clearance samples (TEM) 0.005 fibers/cc
9. HEPA filtered exhaust 0.01 fibers/cc

B. If fiber concentrations exceed the limits listed above, the Contractor will take immediate remedial measures to lower them. These measures may include stopping abatement, modifying work practices, cleaning the work area, using more water, or adding additional negative pressure air machines. The Owner will be notified immediately when maximum allowable fiber concentrations are exceeded.

C. NOTE: Windows, doors, and HVAC vents shall remain sealed and HEPA filtered negative air pressure systems shall remain in service until final air sampling is completed.

D. No visible emissions shall be permitted from any work area at any time during abatement.

3.18 CLEARANCE CRITERIA (NON SOILS)

A. Completeness of asbestos abatement shall be determined by means of a visual inspection and air testing. The visual inspection will be completed by the Contractor and the Owners representative, and will be a visual assessment to determine that all asbestos within the scope of the work has been abated. Visible asbestos remaining in place shall be removed immediately by the Contractor. When an asbestos site has been given visual approval, air testing for final clearance shall be conducted. Clearance testing shall be accomplished by means of Phase Contrast Microscopy or, at the or Owners option, Transmission Electron Microscopy. Clearance standards shall be 0.01 fibers per cubic centimeter unless otherwise specified. When an asbestos abatement site fails to meet the clearance criteria then all costs associated with recleaning the area, and further air monitoring shall be borne by the Contractor until successful clearance sampling is obtained.

3.19 CLEANUP AND CLEARANCE

A. Cleanup

1. After completion of all removal, surfaces from which asbestos containing materials have been removed shall be wet brushed and sponged or cleaned by some equivalent method to remove all visible residue.
2. After asbestos removal is complete remove all sealed containers and equipment used in the asbestos control area.
3. Equipment not decontaminated shall be completely enclosed in polyethylene prior to removal from the work area.
4. Complete all decontamination of remaining polyethylene.
5. After the area has been completely cleaned of all visible residues and, after the area has passed a visual inspection as described below, a thin coat of a satisfactory sealant shall be applied to all surfaces inside the asbestos control area to seal any non-visible residue.

B. Clearance

1. The Contractor and the Owner or Owner's Representative shall conduct and document a visual inspection of the asbestos control area.
2. The inspection shall be complete and incorporate all surfaces inside the asbestos control area.
3. If any sections or areas are deemed to require additional cleaning the Contractor shall immediately provide personnel and equipment to complete the necessary re-cleaning at the expense of the Contractor.
4. Once the area is deemed visually clear by the Owner, and the Contractor, then clearance air sampling shall be conducted.
5. Spray encapsulants shall be allowed adequate drying time prior to final air sampling.
6. Clearance sampling shall be aggressive utilizing hand held blowers and fans throughout the sampling.
7. Pressure differential is to be maintained throughout the sampling.

8. The Contractor will be required to achieve final air quality of 0.01 f/cc as measured by Phase Contrast Microscopy.
9. Clearance sampling will always include a minimum of two samples.
10. PCM analysis shall be completed under guidelines established in 29 CFR 1926.1101.
11. Once clearance sample objectives have been met the remaining equipment and plastic may be removed for decontamination and disposal as ACM materials

3.20 AIR MONITORING

A. Air monitoring of airborne concentrations of asbestos before, during, and after abatement shall be performed by the Air Monitoring Professional in accordance with the OR-OSHA Reference Method in 29 CFR 1926.1101 as appropriate. The analyst shall sign and submit permanent records of all samples analyzed directly to the Contractor and to the Owner within 24 hours of sampling. Such sampling results shall be provided to contractor as a courtesy only and are not intended to be relied upon by the Contractor. No representation or warranty as to the accuracy of such results or the sufficiency of such monitoring to satisfy contractors legal obligations exists in these specifications.

B. The Contractor is to provide additional air monitoring as they deem necessary to meet their own responsibilities at their own expense. If, at any time, the results of air monitoring within the asbestos control area indicate asbestos fiber concentrations above the limits shown in section C, all abatement work in that area shall stop. The contractor shall implement all changes required to correct the problem immediately to reduce fiber concentrations below these limits. The Contractor may resume removal in that area after authorization is received from the Owner or Owners Representative.

1. Equipment: It is the responsibility of the Air Monitoring Professional to furnish and maintain all monitoring equipment required herein, showing proof of proper pump operation and calibration if requested by the Owner. Documentation shall be kept for each filter sample procured as to worker sampled, social security number, operation, work area location, date and time taken, volume of air drawn through the filter, and detection limits. Documentation shall indicate whether tests were taken in work areas, public spaces, at the HEPA fan exhaust, or on workers.

2. Pre-abatement Samples: Reference air samples shall be taken before the asbestos abatement in each distinct work area. The minimum volume for reference samples should follow the same criteria as clearance samples.

3. Air Monitoring During Removal: Within the asbestos control area, area samples shall be taken in the locations of highest expected asbestos concentration. Personnel samples shall be collected during the asbestos removal, within the breathing zone of individuals doing the removal. Personnel samples shall be taken on the worker who is considered to be experiencing the highest level of exposure. Sample volumes will be determined by the Air Monitoring Professional on site. Samples during abatement shall be taken according to the following schedule.

C. Allowable Fiber Concentrations:

Person/Location	(Per Shift)	Fiber Concentration (fibers/cc)
Inside each enclosure (or area of highest activity)	One daily	0.1

In the clean room	One daily	0.01
In adjoining areas outside enclosures	Two daily	0.01
At discharge of negative air machine(s)	One daily	0.01
Highest exposed workers (breathing zone during removal)	At least two daily or 25% of crew in each enclosure	1.0 or 50% of maximum limits of respirators