

HUNTINGTON MIDDLE SCHOOL BID SET

**Volume 1 of 3
Divisions 00-01**

KELSO SCHOOL DISTRICT

601 Crawford Street
Kelso, WA 98626

PREPARED BY:

Integrus Architecture, P. S.
117 S Main St.
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PREPARED FOR:

Kelso School District
Kelso, WA

May 28, 2021

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END OF SECTION

DIVISION 00

PROCUREMENT AND CONTRACTING

REQUIREMENTS

AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the ____ day of _____ in the year Two Thousand Twenty-One
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Kelso School District No. 458
601 Crawford Street
Kelso, Washington 98626

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

Huntington Middle School Modernization and Auxiliary Gym and Vestibule Addition
500 Redpath Street
Kelso, Washington 98626

The Architect:
(Name, legal status, address and other information)

Integrus Architecture
117 South Main Street, Suite 100
Seattle, Washington 98104

The Owner and Contractor agree as follows.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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EXHIBIT A — INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the entire Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☐ — The date of this Agreement.

☒ A date set forth in a notice to proceed issued by the Owner.

☐ — Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the ~~Work~~ Work as provided in the notice to proceed.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

☐ — Not later than () calendar days from the date of commencement of the Work.

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[] By the following date: ~~X~~] By the following date: August 12, 2022.

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work such as phases are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work

Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5. The Contractor shall achieve Final Completion within sixty days of achieving Substantial Completion.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be _____ Dollars (\$), plus Washington State and local sales tax on the Contract Sum, subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item

Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. *(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)*

Item

Price

Conditions for Acceptance

As allowed in the bidding documents or Contract Documents.

§ 4.3 Allowances, if any, included in the Contract Sum: Sum; these descriptions are summary in nature, and the scope of this work is further described in the Contract Documents:
(Identify each allowance.)

Item

Price

4,000 Bank Cubic Yards of Unit Price No. 1 (Authorized Overexcavation)

4,000 Bank Cubic Yards of Unit Price No. 2 (Authorized Overexcavation Fill)

§ 4.4 Unit prices, if ~~any~~ any; these descriptions are summary in nature, and the scope of this work is further described in the Contract Documents:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item

Units and Limitations

Price per Unit (\$0.00)

Unit Price No. 2 (Authorized Overexcavation)

Bank Cubic Yards

Unit Price No. 2 (Authorized Overexcavation Fill)

Bank Cubic Yards

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

Delayed Completion will cause substantial damages to the Owner. The Contractor must read and carefully consider these liquidated damages provisions, and the Contractor shall not bid this Project if it is not prepared to finish the Work on time (including any use of overtime pay at its own costs) or pay these liquidated damage amounts. If the Contractor does not Substantially Complete and Finally Complete all of the Work as provided in Section 3.3.1, the Owner will be forced to incur substantial expenses. For these reasons, liquidated damages will be assessed for each calendar day that Substantial Completion is not timely achieved at \$1,500 per calendar day. Contractor should review

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User Notes:

(1479816007)

and understand Section 15.1.5.2 of the A201 regarding if and how any adverse weather may or may not extend the date of Substantial Completion, as rain or other adverse weather may or may not extend the date of Substantial Completion since rain and other adverse weather must be anticipated during the Project and only materially greater than normal inclement weather extending the critical path of the Project will be the basis for an extension of the Contract Time.

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

N/A

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

See the Contract Documents.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.3 ~~Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the day of the month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than () days after the Architect receives the Application for Payment.~~
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent approved schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of ~~the Work, the Work and as specified in the Contract Documents.~~ The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect or Owner may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document ~~A201™-2017, A201™-2007,~~ General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in writing and in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect ~~determines, determines and the Owner agrees,~~ in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Owner or Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document ~~A201-2017; A201-2007;~~
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

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- .4 For Work performed or defects discovered since the last payment application, any amount for which the Owner or Architect may withhold payment, or for which the Owner or Architect may nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; A201–2007; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Statutory retainage of five percent (5%) shall be withheld from all payments, unless the Contractor submits and the Owner accepts a retainage bond pursuant to RCW 60.28.011(6).

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

N/A

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

Per statute and the Contract Documents.

§ 5.1.7.3 ~~Except as set forth in this Section 5.1.7.3, upon~~ Upon obtaining Substantial Completion of the Work, the Contractor may submit an Application for Payment ~~that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7, sufficient to increase the total payments to ninety-eight percent (98%) of the Contract Sum less retainage (see Section 9.2 of the A201 regarding the final two percent (2%) of the Contract Sum to be paid after Substantial Completion), less such amounts as the Architect shall determine for incomplete Work in excess of the amount allocated under Section 9.2.4 of the A201–2007 and any other amounts as specified in the Contract Documents. The Application for Payment submitted at Substantial Completion shall not include retainage as follows: a request for payment of retainage.~~

(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document ~~A201–2017.~~ A201–2007.

§ 5.1.9 Except with the Owner's prior written approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, except for retainage, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document ~~A201–2017, A201–2007,~~ and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued ~~by the Architect.~~ by the Architect; and
- .3 Final Acceptance by the Owner's Board of Directors has occurred.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than ~~30 days after the issuance of the Architect's final Certificate for Payment, or as follows: sixty days after completion of all requirements for Final Acceptance listed in the A201–2007 General Conditions.~~

§ 5.2.3 Retainage shall be paid according to statute and the Contract Documents.

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§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

%—Payments due and unpaid under the Contract Documents shall bear interest at the Bank of America prime plus two percent per annum, unless a different rate is required by RCW 39.76.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

~~The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)~~

There is no "Initial Decision Maker" for this Project.

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, ~~A201–2007~~, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

☐ — ~~Arbitration pursuant to Section 15.4 of AIA Document A201–2017~~

☐ — ~~Litigation in a court of competent jurisdiction~~

☐ — ~~Other (Specify)~~ ☒ Litigation in Superior Court in Cowlitz County, Washington

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in the County in which the Project is located in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document ~~A201–2017~~ A201–2007.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document ~~A201–2017~~ A201–2007, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

N/A

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document ~~A201–2017~~ A201–2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document ~~A201–2017~~ A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's Designated representative:

(Name, address, email address, and other information)

Mary Beth Tack

Superintendent

Kelso School District No. 458

Init.

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601 Crawford Street
Kelso, Washington 98626
(360) 501-1903
marybeth.tack@kelsosd.org

All communications shall be directed to the Owner's Project Manager identified below except for notices and Claims required by this Agreement, which shall be sent to the Owner's Designated Representative identified above. The Project Manager shall receive copies of all correspondence and submittals with third parties, AHJ's and the Architect.

Construction Services Group, ESD 112
Attn: Andrew Twyman, VMA
Project Manager
(360) 952-3566
andrew.twyman@esd112.org

§ 8.3 The Contractor's Designated representative:
(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in the A201 General Conditions and as described elsewhere in the Contract Documents. AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in is not used and is not a part of the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™-2017 Exhibit A, the A201 General Conditions and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, may be given in accordance with AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise format may be given as set forth below:

(If other than in accordance with AIA Document E203-2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

Per the Contract Documents.

§ 8.7 Other provisions:

N/A

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- 1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- 2 AIA Document A101™-2017, Exhibit A, Insurance and Bonds [Not used.]
- 3 AIA Document A201™-2017, A201™-2007, General Conditions of the Contract for Construction as revised by the Owner. All references to the A201 or to the General Conditions are to the revised 2007

version document. A 2007 modified version of the A201 is used with this Agreement, not the 2017 version.

- .4 ~~AIA Document E203™ 2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:~~~~[Not used.]~~
(Insert the date of the E203-2013 incorporated into this Agreement.)

N/A

- .5 Drawings

Number	Title	Date
<u>See the Index of Drawings in the Project Manual</u>		

- .6 Specifications

Section	Title	Date	Pages
<u>See the Table of Contents in the Project Manual</u>			

- .7 Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

- .8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

☐ ~~AIA Document E204™ 2017, Sustainable Projects Exhibit, dated as indicated below:~~
(Insert the date of the E204-2017 incorporated into this Agreement.)

☒ ~~The Sustainability Plan:~~☒ Supplementary and other Conditions of the Contract:

Title	Date	Pages	
<u>Document</u>	<u>Title</u>	<u>Date</u>	<u>Pages</u>
<u>See the Project Manual dated</u>			
<u>, 2021</u>			

☐ ~~Supplementary and other Conditions of the Contract:~~

Document	Title	Date	Pages
----------	-------	------	-------

- .9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or

proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

Department of Labor and Industries Prevailing Wage Rates.

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

OWNER (Signature)

(Printed name and title)

CONTRACTOR (Signature)

(Printed name and title)

Init.

/

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Graehm Wallace, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 11:17:57 PT on 05/26/2021 under Order No. 1226258892 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A101™ – 2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, as published by the AIA in its software, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

(Signed)

(Title)

(Dated)

AIA® Document A201® – 2007

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Huntington Middle School Modernization and Auxiliary Gym and Vestibule Addition

500 Redpath Street; Kelso, Washington 98626

THE OWNER:

(Name, legal status and address)

Kelso School District No. 458

601 Crawford Street

Kelso, Washington 98626

THE ARCHITECT:

(Name, legal status and address)

Integrus Architecture

117 South Main Street, Suite 100

Seattle, Washington 98104

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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User Notes:

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Owner or Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements. In the event of a conflict or discrepancy among or in the Contract Documents that cannot be resolved by interpreting the Contract Documents as a single, integrated document and giving effect to each provision therein, interpretation shall be governed in the following priority, with an Addendum or a revision to a Contract Document having precedence over the original document and later Addenda having precedence over earlier:

- .1 Agreement (revised A101-2017) (written amendments having precedence)
- .2 Any Supplementary Conditions or Special Conditions
- .3 These revised General Conditions (A201-2007)
- .4 Specifications
- .5 Drawings (large-scale having precedence over small-scale, and written or computed dimensions having precedence over scaled dimensions)
- .6 Material and systems schedules.

In the event that Work is shown on Drawings but not contained in Specifications, the Work as shown shall be provided at no change in the Contract Sum or Contract Time, according to specifications to be issued by the Architect that are consistent with and reasonably inferable from the Work shown on the Drawings.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, Sub-subcontractor (although the Owner does not waive any third-party beneficiary rights or rights to assignment it may otherwise have as to Subcontractors of any tier), (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services construction, services, demolition, abatement, disposal, and administrative procedures required by the Contract Documents, whether completed or partially completed, completed and whether new construction or modification of existing structures, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project of the Project, and may include existing structures not specifically identified as being within the limits of construction but nonetheless subject to impacts resulting from the Work. Where the Work requires construction that modifies or interfaces with existing structures, the Contractor shall take such actions as are necessary to make its Work compatible with and appropriately interface with the as-built conditions of the existing structures.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, the Project Manual, studies, surveys, models, sketches, drawings, specifications, and other similar materials through which the Work to be executed by the Contractor is described.

§ 1.1.8 INITIAL DECISION MAKER

~~The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2. [Not used.]~~

§ 1.1.9 PROJECT MANUAL

The Project Manual is a volume or volumes assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract, Specifications, and other related materials such as construction details and schedules.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any ~~trade-trade, nor shall it remove the Contractor's obligation to complete all of the Work when~~ coordination between the Specifications and the Drawings or coordination between subcontracts is required.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words not defined in the Contract Documents that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 If the Contractor discovers that the Specifications, Drawings, or Project Manual fail to particularly describe the material or kind of goods to be used in any place or discovers an inconsistency or ambiguity between the Specifications, Drawings, or Project Manual or an inconsistency or ambiguity arises internally within the Specifications, Drawings, or Project Manual, then the Contractor shall make inquiry of the Architect as to what is intended and best suited. The material that a competent contractor would use in its place to produce first quality finished Work shall be considered a part of the Contract without adjustment to the Contract Sum or Contract Time. If the Contractor discovers such an inconsistency or ambiguity and fails to notify the Architect, there shall be no adjustment to the Contract Sum or Contract Time.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles ~~or and~~ identified references to Sections in this document, (3) the titles of other documents published by the American Institute of ~~Architects~~ Architects, or (4) published codes and standards.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement. Reference in the singular to an article, device, item or piece

of equipment shall include the larger of the number of such articles indicated in the Contract Documents or the number required to complete the installation. Specification and Drawing notes may include incomplete sentences where words such as "shall," "shall be," "the Contractor shall," and similar phrases shall be supplied by inference. The term(s) "approved," "or approved" and "as approved" mean approved by the Architect, and by any governing codes and officials, and by any quality standards specified as applicable to the work in question. "As directed" means as directed by the Architect or the Owner's Authorized Representative. The term "provide" means to furnish and install. The term "as required" or "as necessary" means as required by applicable codes or standards, and/or as may be required for proper completion of the work. Divisions and Sections included are listed in the "Table of Contents," together with the number of pages in each Section. The Contractor shall check his copies of the Specifications with the "Table of Contents" to ensure that they are complete.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect's consultants ~~shall~~ shall, subject to any right of the Owner, be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and ~~will~~ will, subject to any right of the Owner, retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the ~~Work~~ Work under the Contract Documents and with respect to the Project. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. All copies of the Instruments of Service, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Contractor may retain one record set. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

~~If the parties intend to transmit Instruments of Service Contractor acknowledges that drawings, specifications, Instruments of Service, or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents that Contractor receives in digital form may contain transmission or translation errors and are issued for convenience only, and thus Contractor may only rely upon hard copy documents. Any electronic files other than PDF files will be provided for the convenience of the Contractor. Neither the Architect nor the Owner shall be liable for any inaccuracy or incompleteness in information contained in an electronic copy other than PDF files of an Instrument of Service. Electronic files other than PDF files are not Contract Documents and cannot be relied upon as identical to the Contract Documents. Use of information contained in electronic files other than PDF files is at the Contractor's risk and without liability to the Architect or the Owner. The Contractor is required to execute the Architect's electronic document release to obtain the Instruments of Service other than hard copy and pdf files.~~

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the ~~Owner~~ School District Board of Directors or the Owner's authorized Designated representative. The "Owner" does not include teachers, other district administrators, the school principal, staff, custodians, maintenance or safety workers, other School District employees or consultants, or others at the school. **WAIVERS OF PROVISIONS OF THIS CONTRACT CAN ONLY BE MADE IN WRITING AND BY THE OWNER'S BOARD OF DIRECTORS. No other person is authorized to grant such waivers on behalf of the Owner. No officer, agent, representative, or employee of the Owner shall be personally responsible for any liability arising under this Agreement.**

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable ~~The Contractor may only request~~ evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. ~~Thereafter, the Contractor may only request such evidence if (1) Contract if the Owner fails to make payments of undisputed amounts to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) require or if the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change, due and the Owner agrees.~~ After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. The Contractor is responsible to secure and pay for licenses and all other permits subject to Section 3.7.1.

§ 2.2.3 The Owner ~~shall~~ may furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work. The Contractor should assume that the locations of any underground or hidden utilities, active or abandoned underground tanks, plumbing or electrical runs indicated in the surveys or Contract Documents are shown in approximate locations. The Contractor is responsible for making all utility location checks and verifications. The Contractor is responsible for performing all utilities investigation and location work to determine the precise locations thereof. The Contractor shall not damage or interrupt utilities or utilities services of any kind. The Contractor shall bear the risk of loss arising out of its Work which directly or indirectly damages or interrupts any utilities or utilities services, or causes or contributes to damages of any nature, except in the case where the loss resulted because the utility location information provided by Owner or utility provider was materially inaccurate.

§ 2.2.4 ~~The Owner~~ Owner, upon written request, shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such reasonable information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor ~~one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.~~ free of charge all copies of the Contract Documents as are returned by bidders or as otherwise specified in the Contract Documents. Additional copies may be obtained at the cost of reproduction. Electronic files may be available from the Architect and may be subject to its terms.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly or materially fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order signed personally or by an agent specifically so empowered by the Owner to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of itself or the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue to make reasonable

progress toward the correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In the event such deficiencies threaten the health or safety of the Owner's employees, students or occupants, or exist within fourteen calendar days of the date on which the Owner is scheduled to begin to operate school at the Project, the Owner may immediately proceed to correct such deficiencies without notice. In either such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services and expenses made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. The right of the Owner to correct the Work pursuant to this Section 2.4 shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of itself or others. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. The Owner's exercise of its rights under this Section shall not adversely affect any warranties applicable to the Project.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required bonded, and insured in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents. Documents and submittals approved or accepted pursuant to Section 3.12. The Contractor shall comply with any applicable requirements of the Office of the Superintendent of Public Instruction and any applicable requirements related to Washington Sustainable Schools Protocol.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.1.4 The Contractor shall be and operate as an independent contractor in the performance of the Work and shall have complete control over and responsibility for all personnel performing the Work. The Contractor is not authorized to enter into any agreements or undertakings for or on behalf of the Owner or to act as or be an agent or employee of the Owner.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. By executing this Contract, the Contractor represents and acknowledges that the Contract Sum is reasonable compensation for all the Work, that it is performing with its own forces any percentage of Work specified in the Contract Documents or the Bidding Documents (not including general conditions Work), that the Contract Time is adequate for the performance of the Work, and that it has carefully examined the Contract Documents and the Project site, including any existing structures and access thereto, and any drawings of the existing conditions available from the Owner, and that it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, products, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface conditions and other foreseeable matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, local regulations, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power, utilities, drainage; availability and condition of roads; normal climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Contractor to fully acquaint itself with any such condition or matter shall not in any way relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents and within the Contract Sum and Contract Time and shall not be the basis of a Claim.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications, and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions and verify any existing conditions, including all general reference points and any interfering existing conditions, related to that portion of the Work, and shall observe any conditions at the site affecting it and shall carefully compare and verify such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing such activities. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect and the Owner any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Owner or Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Owner and Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Owner or Architect may require. The Contractor shall comply with all applicable Federal, State, County and City laws, ordinances, rules and regulations, including, but not limited to, the latest applicable versions of:

- .1 International Building Code (with Washington State amendments);
- .2 International Fire Code;
- .3 Uniform Plumbing Code;
- .4 International Mechanical Code;
- .5 National Electrical Code;
- .6 Washington State Energy Code;
- .7 Washington State Rules and Regulations for Barrier-Free Design;
- .8 Americans with Disabilities Act (ADA);
- .9 Federal and State Safety Codes as adapted and/or modified by State and Local Ordinances;
- .10 Washington Sustainable Schools Protocol (WSSP) to the extent that this Project receives any State of Washington funds or as otherwise required by the Contract Documents; and
- .11 Any applicable municipal code.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues any design errors or omissions or inconsistencies noted by the Contractor, or clarifications or instructions issued by the Owner or the Architect in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make any Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities unless the Contractor recognized or reasonably should have recognized such error, inconsistency, omission or difference and failed to report it to the Owner and the Architect. If the Contractor performs any construction activity it knows or reasonably should have known involves an error, inconsistency or omission in the Contract Documents or reports referenced therein without such notice to the Owner and the Architect, the Contractor shall be responsible for such performance and shall bear the attributable costs for correction.

§ 3.2.5 Any investigations of hidden or subsurface conditions have been made for design purposes. The results of these investigations may be bound into the Project Manual or otherwise available for the convenience of the Bidders and the Sub-bidders but are not a part of the Contract Documents unless specifically so indicated. While the Contractor may reasonably rely upon such investigation results, there is no guarantee, express or implied, that the conditions indicated are representative of those existing throughout the site or that unforeseen developments may not occur. The Contractor is solely responsible for reasonably interpreting the information and extrapolating beyond the testing location, including each individual boring, test pit or other location.

§ 3.2.6 The Contractor shall do no Work, except Work related to means and methods and temporary controls, without applicable Drawings, Specifications, or Modifications or, where required, Shop Drawings, Product Data, or Samples, unless instructed to do so in writing by the Owner or Architect.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 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, assembly details 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 Contractor shall review any such specific instructions concerning construction means, methods, techniques, sequences, assembly details, 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. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required thereof, and shall advise the Owner and Architect (a) if the specified instruction or procedure deviates from what the Contractor considers to be good construction practice or jeopardizes jobsite safety, (b) if following the instruction or procedure will negatively affect any warranties, or (c) if the Contractor objects to the instruction or procedure. The Contractor shall propose alternative instructions or procedures acceptable to the Contractor, for which no increase in the Contract Sum or Contract Time will be made. The Contractor shall not proceed with such alternative instruction or procedure without the written acceptance of the Owner and the Architect, and the Contractor shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's principals, agents, employees, Subcontractors of any tier and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors. Subcontractors of any tier.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no condition shall a section of Work proceed prior to preparatory Work having been completed, cured, dried and otherwise made satisfactory to receive the related Work. Responsibility for timely installation of all materials and equipment rests solely with the Contractor, who shall maintain coordination control at all times. The Contractor shall require its Subcontractors of any tier to be familiar with all aspects of the Contract Documents related to their Work. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory Work that has been executed to receive its Work and has notified the Contractor (who shall notify the Owner and Architect in writing) of any defects or imperfections in preparatory Work that will, in any way, affect satisfactory completion of the Work. The lack of such notification or the failure of the Contractor to inspect such portions of the Work shall constitute an acceptance of preparatory Work and a waiver of any later claim of defect therein.

§ 3.3.4 The Contractor shall perform such detailed examination, inspection and quality control and surveillance of the Work as will ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents, including the then current issue of the Drawings, Specifications, and accepted shop drawings. The Contractor shall be responsible for examination, inspection and quality control and surveillance of all Work performed by any Subcontractor of any tier. The Contractor shall determine when it is necessary to perform, and shall perform, tests (in addition to those requested by the Owner or required by the Specifications or any other provision of the Contract Documents) to verify its inspections or to ensure that the Work is being completed in strict accordance with the Contract Documents. The Contractor shall report known errors, omissions, or inconsistencies to the Architect and the Owner before commencing Work. Inspection by or on behalf of the Owner shall not constitute approval of the Work.

§ 3.3.5 The Contractor shall plan and lay out all Work in advance of installation so as to coordinate all Work without delay or revision. The Contractor is responsible for coordination of all the Drawings related to specific locations. The Contractor shall establish and maintain existing lot lines, restrictions, existing survey markers of any kind, and bench marks. The Contractor shall establish and maintain all other lines, levels and bench marks necessary for the execution of the Work and take necessary steps to prevent their dislocation or destruction. The Contractor shall employ a

professional land surveyor registered in the State of Washington to initially lay out and be responsible for the accuracy of the Work and to create and submit to the Owner an as-built survey and accurate utility as-builts for use by the Owner. The Contractor shall provide an as-built surveyed site plan noting all site improvements, including but not limited to building corners, storm, sewer, drains, grade and invert elevations, edge of pavement, signs, markings, back of curb, and sidewalks.

§ 3.3.6 The Contractor's superintendent shall provide a Daily Report to the Owner for each work day during the Contract Time, whether or not any Work is performed, and for each non-work day in which Work is performed on the site. The Daily Report shall be completed on a form included in the Contract Documents or on a form provided by the Contractor and approved by the Owner, and submitted to the Owner and the Architect on the work day following the day covered in the Report. Failure to provide timely Daily Reports to the Owner will entitle the Owner to withhold a portion of the progress payment otherwise due to the Contractor. Payment for any Changes in the Work may not exceed the labor and equipment indicated on the daily reports.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, security, disposal, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The Contractor shall install temporary meters to quantify the Contractor's required reimbursement to the Owner for the Contractor's use of such utilities for the Contractor's and Subcontractors' job trailers, temporary offices, and any temporary restrooms designated solely for Contractor and Subcontractor use.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the After the Contract has been executed, the Owner and the Architect may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only under exceptional circumstances or as described in the Specifications and following the procedures of the Contract Documents. The written request must be submitted on the form included in the Contract Documents and include the specifications for the material or product and any proposed change in the Contract Sum or Contract Time. The Contractor may make substitutions only with the written consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive. By requesting a substitution, the Contractor represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified (or if not equal or better in all respects, the Contractor shall identify such deficiencies), that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that it waives any other known or unknown Claim for an increase in the Contract Sum or Contract Time related to the substitution, that it has coordinated with affected Subcontractors and the substitution will not impact other parts of the Work, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. Work, including observance of drug testing and all smoking, tobacco, drug, alcohol, parking, safety, weapons, background checks, sexual harassment and other rules governing the conduct of personnel at the Owner's property and the Project site. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall ensure that all persons performing the Work comply with the Owner's tobacco-free policy, chemical use and weapons prohibition policies, and shall not and do not engage in inappropriate conduct or inappropriate contact with students or staff. Neither the Contractor nor any of its Subcontractors of any tier shall utilize any employee at the site or permit any contact between children at the Owner's public school and any employee who is a registered sex offender or who has pled guilty to or been convicted of any felony crime involving the physical neglect of a child under Chapter 9A.42 RCW, the physical injury or death of a child under Chapter 9A.32 RCW or Chapter 9A.36 RCW (except motor vehicle violations under Chapter 46.61 RCW), sexual exploitation of a child under Chapter 9A.68A RCW, sexual offenses under Chapter 9A.44 RCW where a minor is a victim, promoting prostitution of a minor under Chapter 9A.88 RCW, the sale or purchase of a minor child under Chapter 9A.64.030 RCW, or violation of similar laws of another jurisdiction. The Contractor shall remove from the Work and Work site any employee or other person who has engaged in such actions or who the Owner reasonably considers objectionable without change in the Contract Sum or Contract Time. Without limiting the generality of the foregoing, the Contractor shall ensure by appropriate provisions in each subcontract agreement that the Contractor may remove from the Work and Work site any Subcontractor or Subcontractor's employee who has engaged in such

action. At no change to the Contract Sum or Contract Time, the Contractor shall remove from the Work and Work site any employee or other person pursuant to this Section 3.4.3. Failure to comply with these requirements is grounds for immediate termination of the Agreement for cause.

§ 3.4.3.1 If requested by the Owner, any employees of Contractor and Subcontractors shall be subject to a record check through the Washington state patrol criminal identification system under RCW 43.43.830 through 834, RCW 10.97.030, and RCW 10.97.050 and through the Federal Bureau of Investigation. The record check shall include a fingerprint check using a complete Washington state criminal identification fingerprint card. The Owner shall provide necessary cooperation associated with required record check. When necessary, applicants may be employed on a conditional basis pending completion of the investigation. If the applicant has had a record check within the previous two years, the Owner may waive the requirement. The Contractor, pursuant with chapters 41.59 and 41.56, RCW, shall pay costs associated with the record check as part of the Contract Sum. The Contractor shall represent to the Owner in writing that it has complied with this requirement.

§ 3.4.3.2 No employees of either the Contractor or any of its Subcontractors of any tier shall harass, intimidate, have physical contact with, or engage in other verbal or physical conduct or communication of a sexual, intimidating or harassing nature with students or the Owner's staff, nor create an intimidating, hostile or offensive environment. The Contractor shall remove from the Work and Work site any employee or other person who has engaged in such actions or who the Owner reasonably considers objectionable at no change to the Contract Sum or Contract Time. Without limiting the generality of the foregoing, the Contractor shall ensure by appropriate provisions in each subcontract agreement that the Contractor may remove from the Work and Work site any Subcontractor or Subcontractor's employee who has engaged in such action. Failure to comply with these requirements is grounds for immediate termination of the Agreement for cause.

§ 3.4.4 Prevailing Wages.

§ 3.4.4.1 Pursuant to RCW 39.12, "Prevailing Wages on Public Works," no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the "prevailing rate of wage" (in effect as of the date that bids are due) as determined by the Industrial Statistician of the Department of Labor and Industries. The schedule of the prevailing wage rates for the locality or localities where this contract will be performed is attached to the executed contract and made a part of the Contract Documents by reference as though fully set forth herein; if not attached, then the applicable prevailing wages are determined as of the Bid Date for the county in which the Project is located and are available at <http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp>. A copy is available for viewing at the Owner's office with advance notice, and a hard copy will be mailed upon request. To the extent that there is any discrepancy between the attached or provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, or if no schedule is attached, the applicable published rates as defined by the Department of Labor and Industries shall apply with no increase in the Contract Sum. It is the Contractor's responsibility to ensure that the correct prevailing wage rates are paid. The Contractor shall provide the respective Subcontractors with a schedule of the applicable prevailing wage rates. Questions relating to prevailing wage data should be addressed to the Industrial Statistician upon request.

Mailing	Department of Labor and Industries
Address:	Prevailing Wage Office
	PO Box 44540
	Olympia, WA 98504
Telephone:	(360) 902-5335
Facsimile:	(360) 902-5300

§ 3.4.4.2 Pursuant to RCW 39.12.060, in case any dispute arises as to what are the prevailing rates of wages for work of a similar nature, and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the director of the Department of Labor and Industries of the state, and his or her decision therein shall be final and conclusive and binding on all parties involved in the dispute.

§ 3.4.4.3 The Contractor shall defend, indemnify and hold the Owner harmless, including attorneys' fees, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") and Chapter 51 RCW ("Industrial Insurance"), including without limitation RCW 51.12.050.

§ 3.4.5 The Contractor shall comply with all applicable provisions of RCW 49.28 ("Hours of Labor").

§ 3.4.6 Pursuant to RCW 49.70, "Worker and Community Right to Know Act," and WAC 296-307-560 et seq., the Contractor shall provide the Owner copies of and have available at the Project Site a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor of any tier at the Project Site. The Contractor shall not be entitled to an increase in the Contract Time or Contract Sum arising from its failure or alleged failure to comply with this statute or regulation.

§ 3.4.7 Certified Asbestos-Free and Lead-Free Products: All products and materials incorporated into the Project as part of the Work shall be certified as "asbestos-free" and "lead-free" by United States standards. At the completion of the Project the Contractor shall submit Certifications of Asbestos-Free and of Lead-Free Materials certifying that all materials and products incorporated into the Work meet the requirements of this section.

§ 3.4.8 The Contractor shall be responsible for labor peace on the Project and shall at all times use its best efforts and exercise its best judgment as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes or strikes where reasonably possible and practical under the circumstances, and shall at all times maintain Project-wide labor harmony.

§ 3.4.9 Materials shall conform to the manufacturer's standards in effect at the date of execution of the Contract Documents and shall be installed in strict accordance with the manufacturer's instructions, specifications and directions. The Contractor shall, if required in writing by the Owner or Architect, furnish satisfactory evidence regarding the kind and quality of any materials identifying thereon the source, and warranting their quality and compliance with the Contract Documents.

§ 3.4.10 Apprenticeship.

§ 3.4.10.1 Pursuant to RCW 39.04.320, no less than fifteen percent (15%) of the Labor Hours shall be performed by apprentices, unless a different amount is permitted or otherwise required by law.

§ 3.4.10.2 Apprenticeship hours shall be performed by participants in training programs approved by the Washington State Apprenticeship Council.

§ 3.4.10.3 "Labor hours" means the total hours of workers receiving an hourly wage who are directly employed on the site of the public works project. "Labor hours" includes hours performed by workers employed by the Contractor and all Subcontractors working on the Project. "Labor hours" does not include hours worked by foremen, superintendents, owners, and workers who are not subject to prevailing wage requirements of RCW 39.12.

§ 3.4.10.4 During the term of this Contract, the Owner may adjust the apprenticeship labor hour requirement upon its finding or determination that includes:

- (1) A demonstration of lack of availability of apprentices in the geographic area of the Project;
- (2) A disproportionately high ratio of material costs to labor hours that does not make feasible the required minimum levels of apprenticeship participation;
- (3) Demonstration by participating contractors of a good faith effort to comply with the requirements of RCW 39.04.300, 39.04.310 and 39.04.320;
- (4) Small contractors or subcontractors (e.g., small or emerging businesses) would be forced to displace regularly employed members of their workforce;
- (5) The reasonable and necessary requirements of the Contract render apprentice utilization infeasible at the required level (e.g., the number of skilled workers required and/or limitations on the time available to perform the Work preclude utilization of apprentices); or
- (6) Other criteria the Owner deems appropriate, which are subject to review by the office of the Governor.

§ 3.4.10.5 The Contractor shall report apprentice participation to the Owner at least monthly, or shall report directly to L&I, on forms provided or approved by the Owner. In addition, copies of monthly certified payroll records may be requested to document the goal including copies with any birthdates and social security numbers (and any other sensitive personal information) redacted so as such copies may be used to respond to any public records requests. The reports shall include:

- (1) The name of the Project;
- (2) The dollar value of the Project;
- (3) The date of the Contractor's notice to proceed;
- (4) The name of each apprentice and apprentice registration number;

- (5) The number of apprentices and labor hours worked by them, categorized by trade or craft;
- (6) The number of journey level workers and labor hours worked by them, categorized by trade or craft; and
- (7) The number, type, and rationale for the exceptions granted.

§ 3.4.10.6 To comply with the changes to RCW 39.04.320 that are effective as of January 1, 2020, the following provisions also apply:

- (1) This Section 3.4.10 specifies that the 39.04.320 apprenticeship goals should be met;
- (2) The Owner shall provide a monetary incentive of One Thousand Dollars for meeting these goals;
- (3) The Contractor shall pay a monetary penalty of One Thousand Dollars for not meeting these goals;
- (4) The Owner is not in a position within existing resources to identify an expected cost value to be included in the bid associated with meeting these goals; and
- (5) Contractor and its Subcontractors are not required to exceed these apprenticeship utilization requirements.

§ 3.4.11 Certified Payrolls

§ 3.4.11.1 Contractor and its Subcontractors of all tiers shall submit certified payrolls in accordance with RCW 39.12.120.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or explicitly permit otherwise. The Contractor further warrants that the Work will be performed in a skillful and workmanlike manner, will conform to the requirements of the Contract Documents, and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or explicitly permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The requirements, including substitutions not properly approved and authorized, is considered defective. Unless such actions are caused by or are the responsibility of the Contractor, the Contractor's warranty excludes remedy for damage or defect caused by abuse, by abuse by the Owner, alterations to the Work not executed by or supervised by or through the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Owner or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance, final payment, and the correction period identified in Section 12.2. The Contractor shall collect, assign, and deliver to the Owner any specific written warranties given by Subcontractors, suppliers, and manufacturers of all tiers. Warranty language shall comply with the Contract Documents and shall be submitted to the Owner and Architect at least thirty days prior to ordering the warranted material or equipment.

§ 3.6 TAXES

The Contractor shall pay sales, ~~consumer, use~~ all taxes, including but not limited to sales, consumer, use, B & O, income, and similar taxes for the Work provided by the Contractor that are legally enacted when bids are ~~received or negotiations concluded, received~~, whether or not yet effective or merely scheduled to go into effect. The only taxes excluded from the Contract Sum and separately reimbursable are state and local sales taxes on the Contract Sum. Tariffs are not reimbursable and shall not increase the Contract Sum regardless of when implemented.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, Owner will pay only for any permits and governmental fees listed as the Owner's responsibility in the Contract Documents, and the Contractor and its Subcontractors of any tier shall secure and pay for, all as a part of the Contract Sum, all other permits, fees, and licenses necessary for the execution of the Work, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded, received, including without limitation all utility connection fees, subcontractor permits and fees including plan check fees for deferred submittals, the application fees and review fees for any and all shop drawings or bidder designed systems, any inspection fees not covered by the initial building permit fee, including reinspection fees, renewals and penalties, and miscellaneous, ancillary and governmental fees, excepting only any permits that the Specifications explicitly indicate the Owner is providing. The Owner will also not pay, and the Contractor will be responsible for and will not be reimbursed for, any license fees or any renewals or penalties.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. The Contractor shall coordinate and schedule all Work with entities with jurisdiction over the site, permitting agencies, utility companies, and other such agencies determined to have jurisdictional authority necessary for completion of the Work. The Contractor shall keep the Owner informed of communications from these authorities and utilities. The Owner may assist the Contractor with such coordination and scheduling, but the Owner is not responsible for any delays caused by such permitting agencies, utility companies, and other such agencies determined to have jurisdictional authority. The Contractor shall be responsible for providing all information, documents, and fees to the permitting agencies, utility companies, and other such agencies determined to have jurisdictional authority within ten days after issuance of the Notice to Proceed as necessary to obtain and coordinate permits, utility and other such connections. The Contractor shall obtain all permit renewals during the course of the Work at the Contractor's expense. The Contractor shall be responsible for providing information and fees to the Department of Labor and Industries.

§ 3.7.3 If the Contractor observes that portions of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, rules and regulations, or lawful orders of public authorities, the Contractor shall promptly notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in any soils or other reports made available by the Owner to the Contractor or in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide written notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 three working days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or ~~both~~ both, consistent with the requirements of the Contract Documents. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15, writing. Any Claim of the Contractor arising from the Architect's determination or recommendation shall be made in accordance with the dispute resolution procedure in Article 15. No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor knew or reasonably should have known of the concealed conditions prior to its executing the Contract.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall immediately notify the Owner and ~~Architect~~ Architect by telephone call and email. Upon receipt of such written notice, the Owner and Contractor shall promptly cooperate with each other and take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations that may affect the human remains, burial markers, archaeological sites or wetlands until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract ~~Time~~ Time, if any, arising from the existence of such remains or features ~~may~~ must be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum 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, but the Contractor shall not be required to employ persons or entities to whom the Contractor has made reasonable and timely written objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required ~~taxes, taxes except sales tax on progress payments,~~ less applicable trade discounts;
- .2 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 Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual ~~actual, reasonable~~ costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section ~~3.8.2.2-3.8.2.2,~~ except where the allowance is based upon a unit price specified in the Agreement.

Allowances are defined in the Contract Documents due to the uncertainty in the scope, price and quantity of the Allowance items at the time the Contract was executed. The Contractor shall track the usage of allowances and report such usage to the Owner on an ongoing basis. Whenever actual costs are more or less than the allowance, the Contract Sum will be adjusted accordingly by Change Order. The Contractor must provide the Owner with written notice of its intent to exceed an allowance amount, with estimates and justification (providing the Owner with the opportunity to approve or reject the excess costs) before exceeding an allowance amount.

§ 3.8.3 Materials ~~When applicable, materials~~ and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a computer literate, experienced and competent superintendent and any necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case. The Contractor shall also employ a competent, experienced project manager and other appropriate management personnel. The Owner shall have the right to approve the superintendent and project manager as well as any field engineers, which approvals shall not unreasonably be withheld.

§ 3.9.1.1 The superintendent, any field engineers and project manager shall be employees of the Contractor. The superintendent and field engineers shall remain on the Project site whenever Subcontractors of any tier are present and not less than eight hours per day, five days per week, unless the job is closed down due to a legal holiday, a general strike, conditions beyond the control of the Contractor, termination of the Contract in accordance with the Contract Documents or unless Final Completion is attained. Attendance on the site between Substantial Completion and Final Completion shall be commensurate with the Work needed to be performed and to ensure timely Final Acceptance. Neither the superintendent nor the Contractor's project manager shall be changed without the approval of the Owner, which shall not be unreasonably withheld. The superintendent shall not be employed on any other project during the course of the Work. The Contractor shall also have available for work on site experienced, skilled workers, such as carpenters, laborers, erection specialists, etc., to perform Work as needed.

§ 3.9.2 ~~The Contractor, as soon as practicable within three days after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing superintendent, project manager, and project engineer. The Owner or Architect may reply within a reasonable time to the Contractor stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent, project manager, or project engineer or (2) that the Architect or Owner requires additional time to review. Failure of the Owner or Architect to reply within the 14-day period a reasonable time shall constitute notice of no reasonable objection. Within three days after issuance of the Notice of Intent to Award, the Contractor shall also furnish to the Architect and Owner:~~

- .1 A chain-of-command organizational chart which includes all supervisory personnel, including the project manager, the project engineer and the superintendent, assistant superintendent and lead foreman, that the Contractor intends to use on the Work. The chart shall specify any limits of authority for each person, including any limitation on his or her ability to speak for and bind the Contractor, as well as any limits on decision-making authority with respect to specific dollar values, contract time, and issues affecting quality of the Work.
- .2 Complete résumés, including all past and current projects, for the project manager, the project engineer and the superintendent. The Owner intends to review the resumes and verify references, and it reserves

the right to reject personnel reasonably believed to be unsuitable or incompatible for the Project. The Contractor shall replace any rejected personnel with an agreeable replacement at no increase in the Contract Sum or Contract Time.

- .3 A list of telephone numbers for all key personnel of the Contractor and its principal subcontractors for purposes of contacting personnel after hours in the event of an emergency. The list shall be periodically updated as necessary to ensure the Owner has the most current information.

§ 3.9.3 The Contractor shall not employ a proposed superintendent-superintendent, project manager, or project engineer to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent-superintendent, project manager, or project engineer without the Owner's consent, which shall not unreasonably be withheld or delayed. The Owner reserves the right, after consultation with the Contractor, to require the Contractor to replace a superintendent, project engineer, project manager or other assistants if the Owner determines that such replacement is in the best interests of the Project. The Owner shall exercise such right in a reasonable manner. The Owner shall be entitled to exercise the same rights concerning any replacement.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly and within seven days after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work-preliminary Contractor's construction schedule for the Work, which shall be consistent with the requirements of the Contract Documents. Prior to submitting its first Application for Payment, the Contractor, after consultation with its Subcontractors, shall submit two hard color copies and an electronic copy of the Contractor's construction schedule consistent with the requirements of the Contract Documents. The Owner may withhold up to one hundred percent of any progress payment until a satisfactory schedule is submitted. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals-least monthly and as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, Project, and shall provide for expeditious and practicable execution of the Work. The Contractor shall allocate in the schedule of values a separate line item in the amount of at least one-half of one percent (.5%) of the Contract Sum for scheduling, which shall cover both the initial schedule and all monthly updates. The Contractor shall request payment for this line item with each Payment Application, based upon the percentage completion of the Project. For any month that the Contractor fails to submit an updated schedule, the Contractor shall not be entitled to any payment for scheduling for that month, and the percentage of the scheduling line item represented by that month's percentage of completion of the Work shall be permanently deducted from the Contract Sum by Change Order.

§ 3.10.1.1 Contractor shall promptly notify the Owner and the Architect in writing of any proposed changes in the Contractor's construction schedule or the Contract Time or of any event which could delay performance of any item of the Work, stating the cause of the delay, expected duration of the delay, the anticipated effect of the delay on the Contractor's construction schedule and the action being taken to correct the delay. Notification of potential delay does not constitute a change in the Contract Time; only a Change Order signed by the Owner can amend the Contract Time. The Contractor shall comply with Article 15 with regard to any delays that it believes are the responsibility of the Owner or are otherwise the subject of a Claim for additional Contract Time.

§ 3.10.1.2 If any Contractor's construction schedule submitted sets forth a date for Substantial Completion for the Work or any phase of the Work beyond the Dates of Substantial Completion established in the Contract Documents (as the same may be extended as provided in the Contract Documents), the Contractor shall submit to the Architect and the Owner for their review and approval a narrative description of the means and methods which the Contractor proposes to use to expedite the progress of the Work to ensure timely completion of the various phases of the Work and the Work as a whole. Regardless of the cause of any delay, the Contractor shall exercise reasonable efforts to bring the Project back into compliance with the Contractor's construction schedule.

§ 3.10.1.3 To the extent that the Contractor or any Subcontractor or material supplier of any tier is responsible for the delay, the Contractor shall take all necessary action to bring the Project back into compliance with the Contractor's construction schedule, including without limitation increasing the number of personnel on the Project and implementing overtime and double shifts at no cost to the Owner.

§ 3.10.2 The Contractor shall prepare and keep current a submittal schedule, promptly after being awarded the Contract and thereafter as necessary update it thereafter at least monthly to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Owner and Architect's review. The Owner and

Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect and Owner reasonable time to review submittals in accordance with the Specifications and submittal procedures. The Contractor shall contemporaneously provide the Owner's Project Manager with a copy of all submittals. The Contractor should expect a response time of at least fourteen days for the Architect's review and at least twenty-one days for review by the Architect's consultants. Complex, inter-related or multiple submittals will often take longer. Neither the Owner nor the Architect can guarantee response times from governmental authorities, such as permitting agencies or review of any required deferred submittals. If the Contractor fails to submit a acceptable submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect, to the Owner and Architect and shall promptly notify the Owner of any substantial deviations from those schedules, including deviations that may affect the critical path. The Contractor's Construction Schedule shall be based upon a critical path method ("CPM") analysis of construction activities and sequence of operations needed for the orderly performance and completion of all separable parts of the Work, in the form of a precedence diagram and activity listing and time-scaled, all in accordance with the Contract and within the Contract Time. The Contractor shall utilize either Microsoft Project or Primavera (current versions) scheduling software for its CPM scheduling. The Schedule shall be resource loaded and provided to the Owner in electronic, readable format. It shall include the Date of Commencement, any milestone dates identified in the Specifications, the Date(s) of Substantial Completion, and the Date(s) of Final Completion in accordance with the Contract Documents. The Schedule shall be updated monthly and submitted with the Contractor's Application for Payment. The Critical Path shall be clearly indicated on the Contractor's Construction Schedule.

§ 3.10.4 The Contractor shall not be entitled to any adjustment in the Contract Time, the Contractor's Construction Schedule, or the Contract Sum, or to any additional payment of any sort by reason of the loss or use of any float time, including time between the Contractor's anticipated completion date and end of the Contract Time, whether or not the float time is described as such on the Contractor's Construction Schedule. To ensure that the Owner is substantively aware and effectively able to mitigate any Project delays, the Contractor shall not be entitled to any extension of time, compensable or otherwise, for any delay that occurred during any time the Contractor has not timely submitted an updated Construction Schedule as required by the Contract Documents.

§ 3.10.5 Any float time to activities not on the critical path shall belong to the Project, and may be used by the Project to optimize its construction process. Any float time between the end of the final construction activity and the final completion date shall belong to the Owner, and may be used by the Owner in determining if additional contract days are to be awarded for changes in the contract or for delays to the contract caused by the Owner. The Contractor will not be entitled to any adjustment in the Contract Time, the Construction Schedule, or the Contract Sum, or to any additional payment of any sort by reason of the Owner's use of float time between the end of the final construction activity and the final completion date or be reason of the loss or use of any float time, including time between the Contractor's anticipated completion date and end of the Contract Time, whether or not the float time is described as such on the Contractor's Construction Schedule.

§ 3.10.6 The Contractor shall attend and participate in and ensure applicable Subcontractors of any tier attend and participate in:

- .1 A preconstruction meeting;
- .2 Regular weekly on-site Project status meetings scheduled by the Owner or by the Architect to review progress of the Work, to discuss the Contractor's progress reports, to obtain necessary Owner's or Architect's approvals, and generally to keep the Owner and Architect informed and involved in the progress of the Project; and
- .3 Other meetings scheduled from time to time by the Owner or by the Architect to review progress of the Work and other pertinent matters.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner and update at least weekly one record copy of the Drawings, Specifications, Addenda, Change Orders-Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one record copy of approved-accepted Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to

the Architect and the Owner and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed. The Contractor shall review and follow the standards referenced in the Specifications. The location of all existing or new hidden piping, valves, conduit, cabling and utilities, as located during the course of construction, shall be appropriately marked until the actual field location dimensions and coordinates are incorporated on the as-built drawings, and mechanical and electrical deviations and changes shall be included. The documents shall include all Architectural, Mechanical, Electrical, Structural, Landscape, and Civil as-built drawings, whether changes occur or not, using Owner-approved CAD software. These documents, as well as the approved permit set of plans, shall be available to the Architect and Owner at the site and reviewed with them on a monthly basis. Upon Final Completion of the Work, the Contractor shall transfer all as-built information in a clear and legible manner as described in the Contract Documents and in compliance with all requirements of local governmental entities, shall certify in writing that these documents reflect complete and accurate "as-built" conditions and shall deliver the following in a clear, clean and legible manner and in compliance with all requirements of local governmental entities: (i) complete, integrated copies of the documents in both paper form in good condition and in electronic form in the same format as originally created by the Architect, (ii) the approved permit set of plans, and (iii) full-size record documents, Shop Drawings, Specifications, Addenda, Operation and Maintenance Manuals and Warranties to the Architect for review and, upon approval, submittal to the Owner in accordance with the provisions of the Contract Documents. Satisfactory maintenance of up-to-date Record Drawings on a monthly basis is a requirement for approval of progress payments.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 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.

§ 3.12.3 Samples are physical examples and/or assemblies or mock-ups that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is for the Contractor to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review and approval or acceptance of such submittals by the Owner or the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the 4.2.7 and shall not constitute an approval or acceptance of the Contractor's means and methods or a waiver or modification of any requirement of the Contract Documents. Informational submittals upon which the Owner or the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the (but are not required to be) returned by the Owner or Architect without action.

§ 3.12.5 The Contractor shall be responsible for tracking the status of submittals. The Contractor shall review for compliance with the Contract Documents, note any deviations from the Contract Documents, approve in writing and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved-accepted by the Owner and Architect or, in the absence of an approved-accepted submittal schedule, with reasonable promptness and frequency and in such sequence and uniform flow rate consistent with the submittal schedule as to cause no delay in the Work or in the activities of the Owner or of separate contractors-contractors, and shall notify the Owner and Architect of any expedited review required. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action, which shall not constitute an Owner-caused delay to the Contractor. At the time of submission, the Contractor shall inform the Architect in writing if expedited review is requested or if there is any deviation in the Shop Drawings, Product Data, or Samples from the requirements of the Contract Documents. So far as practicable, each Shop Drawing or Product Data submittal shall bear a cross reference note referring to Drawing or detail numbers on the Drawings showing the same Work in order to facilitate checking of Shop Drawing or Product Data and their prompt return to the Contractor. Shop Drawings for interrelated Work shall be submitted at approximately the same time. Unless otherwise directed in writing, the Contractor shall provide submittals electronically to the Architect for its use and distribution. The Contractor shall keep accurate records of the receipt, review and delivery of all Submittals and shall submit to the Owner reports every other week on the status of

their review, identifying the location and the causes of any failure to promptly receive such submissions and suggesting responsibility.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

- .1 Each submittal shall bear a stamp or specific written indication that the Contractor has satisfied its responsibilities under the Contract Documents with respect to the review of the submission. The Contractor's superintendent must initial each submittal. Submittals that are simply passed through by the Contractor's clerical staff are not sufficient to meet these requirements.
- .2 Each submittal shall be accompanied by a completed Submittal Cover Sheet, as included in the Project Manual or provided by the Architect, which shall clearly identify applicable Specification Section and paragraph number(s), material, supplier, pertinent data such as catalog numbers and the use for which it is intended.

§ 3.12.7 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-reviewed and no exceptions taken by the Architect.

§ 3.12.8 The Work shall be in accordance with approved-accepted submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval approval, review or acceptance of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval or acceptance to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued 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's approval thereof, approval, review or acceptance thereof. Any corrections or modifications to Shop Drawings made by the Architect shall be deemed accepted by the Contractor, without change in Contract Sum or Contract Time, unless the Contractor provides the Architect with written notice at least three working days before commencing any Work from such Shop Drawings and complies with change procedures in the Contract Documents. The Contractor shall make all corrections requested by the Architect and, when requested by the Architect, provide a corrected submittal without change in the Contract Sum or Contract Time.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval or acceptance of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve-accept or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, permits, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. Materials and equipment on site shall be used directly in the Work and not stored on site after their use is complete. There shall be no use of existing on-site facilities (parking, toilets, etc.) without the Owner's prior approval. Portions of the site may be occupied and in use during construction. The Contractor is responsible to coordinate its Work with any such occupation or use at no increase to the Contract Sum or Contract Time and at no disruption to the occupancy or use.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to access or complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.14.3 Existing structures and facilities, including but not limited to buildings, landscaping, utilities, topography, streets, curbs, and walks, that are damaged or removed due to excavations or other construction work of the Contractor, shall be patched, repaired or replaced by the Contractor to the satisfaction of the Architect, the owner of such structures and facilities, and governmental authorities having jurisdiction. In the event the governmental authorities require that the repairing and patching be done with its own labor and/or materials, the Contractor shall abide by such regulations and it shall pay for such Work at no change in the Contract Sum or Contract Time.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area-area, including roads, free from accumulation of waste materials or rubbish caused by operations under the Contract. At the Owner's request and, in any event, at the completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from ~~the Contractor~~. the Contractor for any clean-up costs. The Contractor will only use waste receptacles provided by the Contractor and will appropriately dispose of any waste material off site.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect keyed access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law and subject to the conditions of this Section 3.18, the Contractor shall defend, indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them-its board members, officials, officers, directors, employees, consultants, Project Manager, students, and volunteers, the Architect, Architect's consultants, and agents and employees, and the successors and assigns of any of

them ("Indemnified Parties") from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, direct and indirect, or consequential, including but not limited to costs, design professional and consultant fees, and attorneys' fees incurred on such claims and in proving the right to indemnification, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent or connected to the acts or omissions of the Contractor, a Subcontractor, Subcontractor of any tier, their agents and anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable, liable ("Indemnitor"), regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.1.1 The Contractor shall fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence of the Indemnitor.

§ 3.18.1.2 If such claims are caused by or are resulting from the sole negligence of the Indemnified Parties, their agents or employees, then the Contractor shall have no duty to defend, indemnify, and hold harmless the Indemnified Parties.

§ 3.18.1.3 If such claims are caused by or are resulting from the concurrent negligence of (i) the Indemnified Parties or the Indemnified Parties' agents or employees, and (ii) the Contractor or the Contractor's agents or employees, then the Contractor shall be obligated to defend, indemnify, and hold harmless the Indemnified only to the extent of the Indemnitor's negligence.

§ 3.18.1.4 The Contractor agrees to being added by the Owner or the Architect as a party to any arbitration or litigation with third parties in which the Owner or Architect alleges indemnification or contribution from the Contractor, any of its Subcontractors of any tier, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. The Contractor agrees that all of its Subcontractors of any tier shall, in their subcontracts, similarly stipulate; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier. To the extent any portion of this Section 3.18 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect.

§ 3.18.1.5 The obligations of the Contractor under this Section 3.18 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity which would otherwise exist as to any party or person described in this Section 3.18. To the extent the wording of this Section 3.18 would reduce or eliminate an available insurance coverage of the Contractor or the Owner, this Section 3.18 shall be considered modified to the extent that such insurance coverage is not affected.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, Subcontractor of any tier, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 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 of any tier under workers' compensation acts, disability benefit acts or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Owner, the Architect, and their respective consultants only under Title 51 RCW, "Industrial Insurance." IF THE CONTRACTOR DOES NOT AGREE WITH THIS WAIVER, IT MUST PROVIDE A WRITTEN NOTICE TO THE OWNER PRIOR TO THE DATE FOR THE RECEIPT OF BIDS. OR THE CONTRACTOR WILL BE DEEMED TO HAVE NEGOTIATED AND WAIVED THIS IMMUNITY.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture or engineering in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative and does not include any employees of the Owner.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the ~~Owner, Contractor~~ Owner and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect ~~as to whom the Contractor has no reasonable objection and~~ whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 ~~The Architect will provide~~ Owner's Project Manager will administer the Owner-Contractor Agreement. ~~The Architect will assist in providing~~ administration of the Contract as described in the Contract Documents and will be an Owner's representative ~~but not the Owner's agent~~ during construction until the date the Architect issues the final Certificate for Payment. ~~Payment and from time to time during the one year period for correction of Work. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents. Documents, unless otherwise modified in writing in accordance with other provisions of the Contract. Neither the Architect nor the Owner's Project Manager is the agent of the Owner and neither is authorized to agree on behalf of the Owner to changes in the Contract Sum or Contract Time, nor to waive provisions of the Contract Documents, nor to direct the Contractor to take actions that change the Contract Sum or Contract Time except that the Owner's representative may issue Construction Change Directives in accordance with Section 7.3.~~

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with and to keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ~~The Architect will not~~ Neither the Architect nor the Owner will have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1. The presence of the Architect or the Owner at the site shall not in any manner be construed as assurance that the Work is being completed in compliance with the Contract Documents, nor as evidence that any requirement of the Contract Documents of any kind, including notice, has been met or waived. The Contractor shall reimburse the Owner for any amounts paid to the Architect for site visits made necessary by the fault of the Contractor or by defects and deficiencies in the Work.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. ~~The Architect will not~~ Neither the Architect nor the Owner will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not Neither the Architect nor the Owner will have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work. Neither the Architect nor the Owner will be responsible for defining the extent of any subcontract or dealing with disputes between the Contractor and third parties.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect and the Owner's Project Manager about matters arising out of or relating to the Contract. The Contractor shall simultaneously provide the Owner's Designated Representative and the Owner's Project Manager with a direct copy of all written communications to the Architect, including all notices, requests, transmittals, substitution requests, RFIs, Claims, and potential changes in the Contract Sum or Contract Time but not including Shop Drawings, Product Data or Samples. Claims must be directed to the Owner's Designated Representative. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Contractor except as provided in the Contract Documents. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's observations and evaluations of the Work and the Contractor's Applications for Payment, the Architect will review and certify ~~make recommendations~~ to and otherwise assist the Owner to determine the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 ~~The Architect has Both the Architect and the Owner have~~ authority to reject Work that does not conform to the Contract Documents. Whenever the Architect or the Owner's Representative considers it necessary or advisable, the Architect or the Owner will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect or the Owner nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Owner or their representatives to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, accept, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product ~~Data and Samples, Data, Samples, and other submittals required by the Contract Documents~~, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken with reasonable promptness in accordance with the submittal schedule approved-accepted by the Architect or, in the absence of an approved accepted submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, weights or gauges, fabrication processes, coordination with the work of other trades, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval or acceptance of a specific item shall not indicate approval or acceptance of an assembly of which the item is a component. The Contractor shall clearly note, and the Architect shall not be required to search out for, any deviations from the Contract Documents not clearly identified by the Contractor, nor shall the Architect be required to review partial submissions of those for which submission for correlated items have not been received. Regardless of how a submittal is marked, the Contractor should not presume that the Architect has reviewed a submittal in every aspect.

§ 4.2.8 The Architect or Owner will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will ~~conduct inspections~~ make observations, make recommendations and otherwise assist the Owner to determine the date or dates of Substantial Completion and the date of final completion; Final Completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents and pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. ~~The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.~~

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the ~~Contract Documents~~ Drawings and Specifications and any modifications thereto on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished in compliance with this Section 4.2.11, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until twenty-one days after written request is made for them.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Architect will endeavor to secure faithful performance of the Contract by both Owner and Contractor, will not show partiality to either and will not be liable to the Contractor for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract ~~Documents.~~Documents and agreeable to the Owner.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within a reasonable time and any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the ~~site.~~site or to supply materials or equipment. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the ~~site.~~site or to supply materials or equipment. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.1.3 A Subcontractor of any tier is a Subcontractor or a Sub-subcontractor.

§ 5.1.4 The designation of terms in this article is not meant to change or alter the definitions contained in RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," RCW 39.12, "Prevailing Wages on Public Works," or other statutory definitions of a subcontractor for the purposes of such statutes.

§ 5.1.5 Responsible Subcontractor: This designation reflects a person or entity who is qualified and can document training, experience, license, and special certification to perform Work, supply materials, or provide equipment required and specified by the Contract Documents.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 ~~Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, Within ten days after the Owner's notice of intent to award the Contract, the Contractor shall furnish in writing to the Owner through and the Architect the names of all persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days of the Work (i.e., at least 2% of the Contract Sum), as well as the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work. The Contractor shall organize this list of Subcontractors in the same sequence as the Index of Specification Sheets, and state the Work category followed by the name of the Subcontractor and/or fabricator (or "Contractor" where the portion of the Work is by the Contractor's own forces), including the address, telephone number, individual name of the project contact, and his or her email address. The list shall be accompanied by evidence of any qualifications required within the technical sections of the Project Manual and satisfactory to the Architect and Owner. The list shall be updated promptly as part of the payment process if additional Subcontractors of any tier are engaged. If the Agreement is executed, no progress payment will become due until this information is so furnished. No action or inaction of the Owner or Architect in response to receipt of the names of the proposed Subcontractors of any tier shall constitute approval of any Subcontractor of any tier or of its performance. The Architect may reply promptly to the Contractor in writing stating (1) whether or not the Owner or the Architect Architect, after due investigation, has reasonable objection to any such proposed person or entity or (2) that the Owner or Architect requires additional time for review. "Reasonable objection" shall include without limitation lack of "responsibility" of the proposed Subcontractor, as defined in RCW 39.26.160(2), the Contract Documents and/or the~~

bidding documents, or lack of qualification as required within the bidding documents or the technical sections of the Project Manual. Failure of the Owner or Architect to reply within the 14-day period promptly shall constitute notice of no reasonable objection. If the Owner makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made ~~reasonable objection~~ a timely and reasonable objection as not "responsible."

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, or a Subcontractor as not "responsible," the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was qualified, "responsible" and reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting ~~names as required~~ qualified names as required, and no increase in the Contract Sum or Contract Time shall be allowed for such change (1) if the Owner reasonably concludes that a proposed Subcontractor of any tier has materially failed to perform satisfactorily (such as causing a material delay) on one or more projects for the Owner within three years of the bidding date or is otherwise not "responsible" as defined in RCW 39.26.160(2), the Contract Documents, or the bidding documents, (2) if the proposed Subcontractor is not qualified as required within the technical sections of the Project Manual, or (3) if the proposed Subcontractor is different from the entity listed with the Bid. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work or compliance with all of the requirements of the Contract within the Contract Sum and Contract Time. The Contractor's listing or use of any Subcontractor that is not "responsible" shall be sufficient cause for the Owner to declare that the Contractor is not a responsible bidder, unless the Contractor agrees to substitute a responsible Subcontractor at no change to the Contract Sum or Contract Time.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution. If the Owner reasonably concludes that any portion of the Work subcontracted by the Contractor is not being performed in accordance with the Contract Documents, the Contractor shall, upon request of the Owner, remove the Subcontractor performing such Work. This removal shall not relieve the Contractor of its responsibility for the performance of the Work or complying with all of the requirements of the Contract within the Contract Sum and Contract Time, nor shall the Owner be obligated to request any such removal.

§ 5.2.5 The Contractor shall perform with its own organization and under its immediate supervision a portion of the Work, not including general conditions, amounting to not less than the percentage (if any) of the total Contract Sum specified in the Contract Documents or in the Bidding Documents.

§ 5.2.6 The Contractor shall verify responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that engages other Subcontractors must verify responsibility criteria for each of its lower-tier Subcontractors. Verification shall include that each Subcontractor, at the time of subcontract execution, meets the responsibility criteria listed in the Instructions to Bidders or Specifications.

§ 5.2.7 The Contractor shall schedule, supervise and coordinate the operations of all Subcontractors of any tier, including any suppliers of early procurement items and any Assigned Subcontractors. No subcontracting of any of the Work shall relieve the Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or from its responsibility for the performance of any other of its obligations under the Contract Documents. The Contractor is responsible for the timely, accurate and appropriate Subcontractor coordination of the Work of lower tier Subcontractors in accordance with the overall Work, including communications, meetings, drawings, illustrations, and other necessary associated activities required for the successful coordination of all trades, schedules, materials and workmanship. The Owner shall provide to the Contractor copies of any written Owner-Supplier agreements to any early procurement contracts, to the extent that such agreements are identified in the Specifications.

§ 5.2.8 The Contractor agrees to diligently, and using its best efforts, cause each Subcontractor of any tier to correct, at that Subcontractor's own expense, all Work performed by the Subcontractor of any tier that is defective in material or workmanship or otherwise fails to conform to the Contract Documents, including all necessary removal, replacement and/or repair of any other portion of the Project which may be damaged in removing, replacing or repairing any portion of the Project. If any Subcontractor of any tier defaults in its obligation promptly to correct any such deficiency, the Contractor shall be responsible for correcting the deficiency.

§ 5.2.9 The Contractor shall provide, and shall cause its Subcontractors of any tier to provide, all required notices and comply with all applicable health and safety laws, rules, regulations, codes and lawful orders of public authorities and of quasi-governmental authorities relating to the Work, including without limitation all OSHA and WISHA requirements, and the Contractor shall, and shall cause applicable Subcontractors of any tier to, indemnify, defend and hold harmless the Owner from and against any and all claims, liabilities, fines and attorneys' fees arising from any failure of the Contractor or a Subcontractor of any tier to have complied with any such requirements in any respect.

§ 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors. The Contractor shall provide to the Owner copies of the written agreements between the Contractor and any Subcontractor, and a Subcontractor and any sub-tier Subcontractor, upon request.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner ~~for cause~~ pursuant to Section 14.2 or 14.4 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. ~~If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.~~

§ 5.5 LIENS

§ 5.5.1 The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors of any tier) to the extent that the Owner has paid the Contractor for such. The Contractor shall furnish to the Owner such releases of liens and Claims and other documents monthly with its payment

applications to evidence such payment (and discharge). The Owner may, at its option, withhold payment, in whole or in part, to the Contractor until such documents are furnished. The Contractor may provide other security acceptable to the Owner, such as a bond, in lieu of paying disputed liens or Claims.

§ 5.5.2 The Contractor shall defend, indemnify, and hold harmless the Owner from any liens, including all expenses and Architects' and attorneys' fees, except to the extent a lien has been filed because of the failure of the Owner to make a contractually required payment.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.15, except that the Contractor shall have no Claim for such construction or operations to the extent disclosed in the Bidding Documents or Contract Documents or known to the Contractor prior to submission of its bid. The Contractor is also responsible to coordinate its Work with any other entities performing work on or adjacent to the site, such as work in the right of way and work by utility companies, and the Contractor shall incorporate such work into its construction schedule.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules, schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement with the Owner. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents. If the Contractor receives items from a separate contractor or from the Owner for storage, erection or installation, the Contractor shall acknowledge receipt for items delivered, and thereafter will be held responsible for the care, storage and any necessary replacement of items received.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect and Owner apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse and indemnify the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction of the separate contractor. If such a separate contractor sues or initiates any proceeding against the Owner on account of any damages or delays

alleged to have been caused by the Contractor, the Owner shall notify the Contractor. The Contractor shall defend all such proceedings at its own expense, and shall defend, indemnify, and hold the Owner harmless from any damages awarded on such claims, including all attorneys' fees and other costs incurred by the Owner.

§ 6.2.4 The Contractor shall promptly remedy damage caused by the Contractor ~~wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.~~

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.2.6 Should the Contractor or any of its Subcontractors of any tier cause damage of any kind, including but not limited to delay, to any other contractor or subcontractor on the Project, the Contractor shall, upon due notice, promptly attempt to settle with such other contractor or subcontractor by agreement or otherwise to resolve the dispute.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and ~~the Architect will allocate the cost among those responsible~~ responsible plus a ten percent (10%) markup on such costs.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, solely by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations and qualifications stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect or Owner alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.1.4 Before effectuating a change in the Work or in the Contract Documents, the Owner may request the Contractor to propose the amount of change in the Contract Sum (such as through a Proposal Request), if any, and the extent of change in the Contract Time, if any, arising from the proposed change in the Work. The Contractor shall submit its responsive proposal as soon as possible and within seven days and shall in good faith specify the components and amounts by which the Contract Sum and/or Contract Time would change. Labor, materials and equipment shall be limited to and itemized in the manner described in Section 7.5 for the Contractor and Subcontractors of any tier. If the Contractor fails to respond within this time, the Owner may withhold some or all of a progress payment otherwise due until the tardy proposal is received. If the Owner explicitly accepts the proposal in writing, the Owner and the Contractor will be immediately bound to the terms of the proposal, the change will be included promptly in a future Change Order, and the change in the Work described in the proposal shall commence expeditiously. The Owner may reject the proposal, in which case the Owner may either not effectuate the change in the Work or may order the change through a Construction Change Directive or supplemental instruction or an order for a minor change in the Work. The Owner and Architect may confer directly with Subcontractors of any tier concerning any item proposed to the Owner under this Article.

§ 7.1.5 If the Contractor adds a reservation of rights that has not been initialed by the Owner to any Change Order, Construction Change Directive, Change Order Proposal, Application for Payment or any other document, all amounts therein shall be considered disputed and not due or payable unless and until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and, in all cases, initialed by the Owner. If the Owner makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initialed by the Owner to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment, then the reservation of rights shall be deemed waived, withdrawn and of no effect.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Contract Documents, including any change in the requirements of the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner or Owner's Representative and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly. The Owner's use of a Construction Change Directive does not constitute agreement that the directive constitutes a change in the Work, the Contract Sum, or the Contract Time. For any change in the Work, whether initiated by a Construction Change Directive or a Change Order Proposal, the Contractor must submit its proposed price and any proposed extension of the Contract Time to the Owner within fourteen days of the date of the Construction Change Directive or Change Order Proposal. If the Contractor fails to submit a proposed price and time within this time period, the Owner may establish what it believes to be the fair price of the changed Work, and any additional Contract Time, and this price and time submitted by the Owner shall be final and binding upon the parties, as if they had signed a Change Order in this amount, without recourse to submitting any claims or litigation. Payment for any Changes to the Work shall not exceed the labor and equipment indicated on the daily work logs.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order. Order or a Change Order Proposal.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following ~~methods:~~methods or as mutually agreed by the Owner and Contractor:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties (accompanied by the Contractor's itemized estimate of probable cost) and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (e.g., more than fifty percent) in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices but not the Contract Time or any other portion of the Contract Sum shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work ~~involved and advise the Architect involved.~~ As soon as possible, and within seven days of receipt, the Contractor shall advise the Architect in writing of the Contractor's agreement or disagreement with the proposed adjustment or the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time. The Contractor's response shall reasonably specify the reasons for its disagreement and the adjustment or other terms that it proposes. Without such timely written response, the Contractor shall conclusively be deemed to have accepted the Owner's adjustment. The Contractor's disagreement shall not relieve the Contractor of its obligation to comply promptly with any written notice issued by the Owner or the Architect. The adjustment shall then be determined by the Architect in accordance with the provisions of the Contract Documents. The ultimate adjustment shall not exceed the larger amount submitted.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including any adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be ~~recorded as incorporated into~~ a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, or if the cost is to be determined under Section 7.3.3.3, the Contractor shall provide a not-to-exceed price for the Construction Change Directive Work within fourteen days of receipt of the Construction Change Directive, and the Contractor shall keep and present, itemized in the categories of Section 7.5 and in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 — Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
 - .2 — Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
 - .3 — Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
 - .4 — Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
 - .5 — Additional costs of supervision and field office personnel directly attributable to the change.
- § 7.3.7.1** In order to facilitate checking of such quotations, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by complete itemization of costs, including labor, equipment, material and subcontract costs. Labor, equipment and materials shall be itemized in the manner described in Section 7.5. When major cost items arise from Subcontractors of any tier, these items shall also be similarly itemized. Approval may not be given without such itemization. Failure to provide data within twenty-one days of the Owner's or Architect's request shall constitute waiver of any Claim for changes in the Contract Time or Contract Sum. The total cost of any change, including a Claim under Article 15, shall be limited to the reasonable value, as determined by the Owner (subject to appeal through the dispute resolution procedure of Article 15), of the items in Section 7.5. Unless otherwise agreed in writing by the Owner, the cost shall not exceed the lower of the prevailing cost for the work in the locality of the Project or the cost of the work in the current edition of R.S. Means Company, Inc., Building Construction Cost Data as adjusted to local costs and conditions. The Architect and the Owner may communicate directly with Subcontractors of any tier concerning costs of any Work included in a Construction Change Directive. If the Contractor disagrees with the method or the adjustment in the Contract Time, the adjustment or method shall be referred to the Architect for determination, and any adjustment shall be limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be the largest of (i) the reasonable and prevailing value of the deletion or change, (ii) the line item value in the Schedule of Values, or (iii) the actual net cost as confirmed by the Architect-Owner. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15, and provided that any reservations of rights regarding the Construction Change Directive have been initialed by the Owner, amounts not in dispute for such changes in the Work may be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a will be recorded by preparation and execution of an appropriate Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect ~~has and the Owner have~~ authority to order minor changes in the Work (sometimes called a Design Clarification, Field Authorization, or Supplemental Instruction) not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect ~~and shall be binding on the Owner and Contractor, and Owner and~~ shall be binding on the Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that such order, or the response to a Request for Information, causes an increase in the Contract Sum or Contract Time, the Contractor must properly submit a notice and Claim pursuant to Article 15.

§ 7.5 PRICING COMPONENTS

§ 7.5 The total cost of any Change in the Work or of any other increase or decrease in the Contract Sum, including a Claim, shall be limited to the following components:

§ 7.5.1 Direct Labor Costs: These are the labor costs determined by the number of additional craft hours and the hourly costs necessary to perform the change in the Work. The hourly cost shall be based upon the following:

- .1 Basic wages and fringe benefits: The hourly wage (without markup or labor burden) and fringe benefits paid by the Contractor as established by the Washington Department of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable, not to exceed that specified in the applicable "Intent to Pay Prevailing Wage" for the laborers, apprentices, journeymen, and foremen performing and/or directly supervising the Change in the Work on the site. The premium portion of overtime wages is not included unless pre-approved in writing by the Owner. Costs paid or incurred by the Contractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Contractor shall provide copies of certified payrolls for itself and Subcontractors of any tier upon the Owner's request.
- .2 Workers' insurances: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.
- .3 Federal insurances: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).

Upon the Owner's request, the Contractor shall substantiate all claimed wage rates and shall provide a breakdown of the various components of the labor costs in a form provided or approved by the Owner.

§ 7.5.2 Direct material costs: This is an itemization, including material invoice, of the quantity and cost of additional materials reasonable and necessary to perform the change in the Work. The unit cost shall be based upon the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed except when approved in advance by the Architect and the Owner. If the Contractor is offered discounts and/or rebates based upon prompt payment, the Contractor shall offer the Owner the opportunity to take advantage of such discount and/or rebate, and if the Owner makes such a prompt payment then the Owner shall only be charged the price as reduced by the discount and/or rebate. If the Owner declines the opportunity the Contractor may keep any such discounts and/or rebates it achieves through its own prompt payment. If the Contractor does not provide the Owner the opportunity to participate then the Contractor may only charge the net costs after consideration of discounts and rebates.

§ 7.5.3 Construction equipment usage costs: This is an itemization of the actual length of time that construction equipment appropriate for the Work will be used solely on the change in the Work at the site times the applicable rental cost as established by the lower of the local prevailing rate published in The Rental Rate Blue Book by EquipmentWatch, Atlanta, Georgia (copies of which shall be provided to Owner), as modified by the AGC/WSDOT agreement or the actual, reasonable rate paid to unrelated third parties as evidenced by rental receipts. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Owner's prior approval. Total rental charges for equipment or tools shall not exceed 50% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the Site solely for the change in the Work. If more than one rate is applicable, the best available rate shall be utilized. The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design and in good working condition and include full compensation for furnishing all fuel, oil, lubrication, repairs, maintenance, and insurance to the same extent as the comparable Blue Book or fair market rate. Equipment not of modern design and/or not in good working condition shall have lower rates. Hourly, weekly, and/or monthly rates, as

appropriate, shall be applied to yield the lowest total cost. When rental rates payable do not include fuel, lubrication, maintenance, and servicing, as defined as operating costs in the reference, such operating costs shall be reimbursed based on actual costs. The rate for equipment necessarily standing by for future use on the changed Work shall be no more than 50% of the rate established above. If equipment is required for which a rental rate is not established by Blue Book, an agreed rental rate shall be established for that equipment, which rate and use must be approved by the Owner prior to performing the Work.

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

- .1 Contractors' liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance provided under Section 11.1.3, and subject to audit) of any changes in the Contractor's liability insurance arising directly from the changed Work; and
- .2 Public works bond: The actual cost (expressed as a percentage submitted with evidence of bondability under Section 11.4.1, and subject to audit) of the change in the Contractor's premium for the Contractor's statutorily required performance and payment bond arising directly from the changed Work, and any such premiums for the Changed Work on Subcontractor bonds that have been contractually required by the Owner. The Contractor is not entitled to any increased premium on any retainage bond or any Subcontractor bond not contractually required by the Owner as such bonds are optional.

Upon request, the Contractor shall provide the Owner with supporting documentation from its insurer or surety of any associated cost incurred.

§ 7.5.5 Subcontractor costs: These are payments the Contractor makes to Subcontractors for changed Work performed by such Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 7.5.

§ 7.5.6 Fee: This is the allowance for all combined overhead, profit and other costs, including all office, home office and site overhead (including facilities, purchasing, clerical, project manager, project engineer, other engineers, project foreman, estimator, superintendent and their vehicles and assistants), taxes (except for sales tax), employee per diem, subsistence and travel costs, warranty, safety costs, printing and copying, quality control/assurance, purchasing, small or hand tool (a tool that costs \$500 or less and is normally furnished by the performing contractor) or expendable charges, preparation of as-built drawings, impact on unchanged Work, Change Order and Claim preparation, and delay and impact costs of any kind (cumulative, ripple, or otherwise). No such costs may be added to the total cost to the Owner of any Change Order, Construction Change Directive, Claim or any other claim of any kind on this Project. No Fee shall be due, however, for direct settlements after Substantial Completion by the Owner of Subcontractor claims. The Fee shall be limited in all cases to the following schedule:

- .1 The Contractor shall receive 12% of the cost of any materials supplied or Work properly performed by the Contractor's own forces.
- .2 The Contractor shall receive 8% of the amount owed (less fee) directly to a first-tier Subcontractor or supplier for materials supplied or for Work properly performed by that Subcontractor or supplier.
- .3 Each Subcontractor of any tier shall receive 12% of the cost of any materials properly supplied or Work performed by its own forces.
- .4 Each Subcontractor of any tier shall receive 8% of the amount (less fee) it properly incurs for materials supplied or Work properly performed by its suppliers or subcontractors of the next lower tier.
- .5 The Contractor and its Subcontractors of any tier shall receive 5% of any amounts (less fee) owed to any remote, sub-tier subcontractors which are within the lines of contractual responsibility but not in privity of contract with such Contractor or Subcontractors, for Work performed by that remote, sub-tier subcontractor.
- .6 The cost to which this Fee is to be applied shall be determined in accordance with Section 7.5.1 through 7.5.4. The phrase "less fee" means that none of the percentages in this Section 7.5.6 are applied to the fee earned by other Subcontractors or suppliers so that fees are not compounded, but fees are only applied to the actual costs of the Changed Work performed.
- .7 The total summed Fee of the Contractor and all Subcontractors of any tier shall not exceed 25% of any amounts owed to any remote, lower-tier Subcontractors that are within the lines of contractual responsibility but not in privity of contract with such Contractor or Subcontractor(s), for Work performed by that remote, lower-tier Subcontractor. If the Fee would otherwise exceed 25%, the Contractor shall proportionally reduce the Fee percentage for the Contractor and all Subcontractors except for the Subcontractor supplying material or performing Work with its own forces. None of the

fee percentages authorized in this Section 7.5.6 may be compounded with any other fee percentage or percentages authorized in this Section.

If a change in the Work involves both additive and deductive items, the appropriate Fee allowed will be added to the net difference of the items. If the net difference is negative, no Fee will be added to the negative figure as a further deduction. The parties acknowledge that the fees listed in this Section 7.5.6 are substantially greater than the fees and overhead normally included in determining the Contract Sum bid; that these higher percentages are a sufficient amount to compensate the Contractor for all effects and impacts of Changes in the Work; and that the resultant overcompensation of the Contractor for some Changes compensates the Contractor for any Changes for which the Contractor believes the percentage is otherwise insufficient.

§ 7.5.7 The cost of any changed Work or of any other increase or decrease in the Contract Sum, including a Claim, shall not include, among other things, consultant costs, attorneys' fees, or Claim preparation expenses. Such items are not recoverable from the Owner.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement by the Owner in its conditional notice to proceed, which may not be issued until the Contractor has complied with the terms of the notice of award the Contract. Work on the site may begin when the Contractor complies with the requirements of the Conditional Notice to Proceed. Within ten days of issuance of the Conditional Notice to Proceed, the Contractor shall submit the executed contract, evidence of bondability, certificates of insurance, and all other documents required by the Contract Documents.

§ 8.1.3 The date of Substantial Completion (or a designated portion thereof) is the date certified by the Architect and set by the Owner in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. Time and shall achieve Final Completion within sixty days thereafter (or such other period of time for specific phases as is specified in the Contract Documents).

§ 8.2.4 THE TIMELY COMPLETION OF THIS PROJECT IS ESSENTIAL TO THE OWNER. The Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time; however, it would be difficult if not impossible to determine the amount of such damages, which could include, for example, personnel and overtime costs, transportation costs, governmental fees, storage costs, portable rental costs, loss of use, and lost opportunities. Consequently, provisions for liquidated damages as a reasonable estimate of loss may be included in the Contract Documents. The Owner's right to liquidated damages is not affected by partial completion, occupancy, or beneficial occupancy. The Contractor shall furnish sufficient forces, construction plant and equipment, and shall work such hours, including night shifts, overtime operations and weekend and holiday work as may be necessary to insure the completion of the Work in accordance with the date of Substantial Completion and the accepted Contractor's Construction Schedule. If the Contractor fails to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier fails to meet the Contractor's Construction Schedule, the Contractor shall take such steps as may be necessary to immediately improve

its progress by increasing the number of workers, shifts, overtime operations or days of work (to the extent allowable under local hours of work ordinances) or other means and methods, all without additional cost to the Owner.

§ 8.2.5 As the Work is to be performed in phases, with separate dates set forth for Substantial Completion elsewhere in the Contract Documents, then the specified liquidated damages shall apply separately to each such phase unless otherwise specified.

§ 8.2.6 Any provisions in the Contract for liquidated damages shall not relieve or release the Contractor from liability for any and all damage or damages suffered by the Owner due to other breaches of the Contract or suffered by separate contractors.

§ 8.2.7 It is the Contractor's option, but not its right, to attempt to complete the Project earlier than the dates specified in the Contract Documents. Thus any claim based upon delay shall be evaluated based upon the dates specified in the Contract Documents, not an earlier projected completion that the Contractor may propose.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries; (2) by changes ordered in the Work only to the extent reflected in approved Change Orders providing for specific extensions of the Contract Time; or (3) by unanticipated, extraordinary weather (see Section 15.1.5.2); or (4) by unexpected industry-wide labor disputes, fire, seismic event, unusual delay in deliveries, governmental delays (including unanticipated permit delays not caused by the Contractor; delays caused by a local jurisdictions' scheduled days off shall not be considered an excusable delay), unavoidable casualties or other causes beyond the Contractor's control; or by (5) by delay authorized by the Owner pending mediation and arbitration; or by litigation; or (6) by other causes that the Architect Owner determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine, time, limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby, as the Owner may determine consistent with the provisions of the Contract Documents. In no event, however, shall the Contractor be entitled to any extension of time absent proof of (1) delay to an activity on the critical path of the Contract Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion, or (2) delay transforming an activity into the critical path of the Contract Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15-15 and shall include any proposed changes in the Contractor's Construction Schedule or the Contract Time, a description of any event that could delay performance or supplying of any item of the Work, the expected duration of the delay, the anticipated effect of the delay on the Contractor's Construction Schedule, and the action being taken to correct the delay situation. That the Owner or Architect may be aware of the occurrence or existence of a delay through means other than the Contractor's written notification shall not constitute a waiver of a timely or written notice or Claim. The Contractor has an obligation to minimize and mitigate schedule impacts.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

- .1 If the delay was not caused by the Owner, the Contractor, a Subcontractor of any tier, or the Architect, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time in accordance with the Contract Documents but not an increase in the Contract Sum. If the delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum. The Contractor shall be entitled to a change in the Contract Sum only if the delay was caused by the Owner or the Architect, or anyone acting on behalf of them. The Contractor shall not recover damages, an equitable adjustment or an increase in the Contract Sum or Contract Time from the Owner where the Contractor could have reasonably avoided the delay by the exercise of due diligence. The Contractor shall be able to recover an increase in the Contract Sum, provided it is consistent with the terms of the Contract Documents, only if the delay directly impacts the critical path, could not reasonably have been avoided, was unreasonable and was caused by the Owner or anyone acting on its behalf as permitted under the Contract Documents. The Owner is not obligated directly or indirectly for damages, an equitable

- adjustment, or an increase in the Contract Sum for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.
- .2 In the event the Contractor (including any Subcontractors of any tier) is held to be entitled to damages from the Owner for delay beyond the payment permitted in Section 7.5.6, it is agreed that the total combined damages to the Contractor and any Subcontractors of any tier for each day of delay shall not exceed the daily liquidated damage rate specified in the Contract Documents due the Owner for the Contractor's delay in achieving Substantial Completion. By submitting its bid on the Work, the Contractor represents that it would be difficult if not impossible to determine the amount of any delay damages due it, that it has taken this provision for liquidated damages into consideration in its bid, and that these liquidated damages are a reasonable estimate of its loss. No damages will be allowed for any time prior to seven days before receipt of written notice of the Claim of the delay pursuant to Article 15.
 - .3 The Contractor shall not in any event be entitled to damages arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant underrun; trade stacking; reassignment of workers; rescheduling of work, schedule compression, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended or expanded overhead or general conditions; profit upon damages for delay; impact damages; cumulative impacts; or similar damages. Any effect that such alleged costs may have upon the Contractor or its Subcontractors of any tier is fully compensated through the percentage Fee on Change Orders paid through Section 7.5.6 and any liquidated damages paid hereunder.
 - .4 The Contractor shall not be entitled to any adjustment in the Contract Time or the Contract Sum, or to any additional payment of any sort, by reason of the loss or the use of any float time, including time not on the critical path or time between the Contractor's anticipated completion date and the end of the Contract Time, whether or not the float time is described as such on the Contractor's Construction Schedule.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

~~Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, At least fourteen days before the first Application for Payment, the Contractor shall submit to the Architect, before the first Application for Payment, Architect and Owner a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect or Owner may require. At a minimum, the Work shall be itemized by Specification section or system, separate values for labor, materials and equipment shall be provided, and line items on the schedule of values shall be tied to the Contractor's schedule. Quantities shall be provided for each section or system of the Work. The Contractor shall itemize and prepare the schedule of values as indicated by the Owner's form with respect to form, content, and level of detail. This schedule, unless objected to by the Architect, Architect or the Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment.~~

- .1 Mobilization shall be a maximum of one-half of one percent (0.5%) of the Contract Sum, and shall be paid only if supported by an itemized breakdown of costs acceptable to the Owner.
- .2 Payment applicable to the expenses of Contractor's bond and/or contractually required builder's risk insurance will be made only upon receipt of paid invoices from surety and/or insurance carrier.
- .3 No payment will be made for shop drawings or submittals until on-site receipt of materials, except for structural steel, fire sprinkler, automatic temperature control, and fire alarm shop drawings that have been reviewed and accepted by the Architect.
- .4 The schedule of values shall also allocate at least two percent (2%) of the initial Contract Sum as a separate line item for that portion of the Work between Substantial Completion and Final Completion to be entitled "Final Documentation and Punchlist Completion," which shall include without limitation punchlist completion and furnishing all deliverables, which will be earned and distributed as follows: half shall be allocated for the completion of the punchlist and commissioning Work; one-quarter shall be allocated for completion of approved operations and maintenance data as defined in the Contract Documents; and one-quarter shall be allocated for completion of approved record documents, warranties and bonds, delivery of extra stock, and all other documentation or items of the Work

required for Final Completion and final payment. This percentage is not the statutory retainage described in Section 9.3.4 or any other retainage but rather requires the Contractor to recognize that the Contractor and its Subcontractors will expend significant costs in advancing the Work from Substantial Completion to Final Completion, and that this amount is not earned until Final Completion of the Work is accomplished. At its sole discretion, the Owner may release portions of these amounts progressively as items are completed.

- .5 Itemize separately line item costs for permits, bonds, insurance, layout and supervision, scheduling, and temporary facilities.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents. Progress payments will be made monthly for Work duly certified, approved, and performed during the calendar month preceding the application. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent and in accordance with the approved Application for Payment.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders. Draft Application. Within the first five days of each month, the Contractor shall submit to the Architect a report on the current progress of the Work as compared to the Contractor's Construction Schedule, an updated Construction Schedule, and a draft, itemized application for payment for Work performed during the prior calendar month on a State of Washington Application for Payment on Contract form approved by the Owner. This shall not constitute a payment request. The Contractor, the Architect and the Owner shall meet within the next five days and confer regarding the current progress of the Work and the amount of payment to which the Contractor is entitled. The Architect or the Owner may request the Contractor to provide data substantiating the Contractor's right to payment as the Owner or the Architect may require, such as copies of requisitions from Subcontractors of any tier, lien releases, and certified payroll records, and reflecting retainage as provided elsewhere in the Contract Documents. The Contractor shall not be entitled to make a payment request, nor is any payment due the Contractor, until such data is furnished.

§ 9.3.1.2 Payment Request. Within five days after the Contractor, the Owner and the Architect have met and conferred regarding the updated draft application, and the Contractor has furnished all progress information required and all data requested by the Owner or Architect under Section 9.3.1.1 above, the Contractor has submitted current meeting minutes, daily reports, as-built drawings and an updated (bar chart) construction schedule, the Contractor may submit a payment request in the agreed-upon amount, in the form of a notarized, itemized Application for Payment, in triplicate, for Work properly performed during the prior calendar month on a form supplied or approved by the Owner, along with a lien release on a form approved by the Owner from each Subcontractor for whose Work the Owner paid the Contractor for the prior month. The Application shall also state that prevailing wages have been paid in accordance with the prefiled statements of intent to pay prevailing wages on file with the Owner and that all payments due Subcontractors of any tier from the Owner's payment the prior month have been made. The submission of this Application constitutes a certification that the Work is current on the Contractor's Construction Schedule, unless otherwise noted on the application. If required by the Owner, the Contractor shall submit proof of payment to Subcontractors for prior months, such as lien releases or cancelled checks. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay. A payment request shall not be valid unless it complies with the requirements of the Contract Documents.

§ 9.3.1.3 Disputed Amounts. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may, also within the same five-day period, submit to the Owner and the Architect along with the approved payment request a separate written payment request specifying the exact additional amount due, the category in the Schedule of Values in which the payment is due, the specific Work for which the additional amount is due, and why the additional payment is due. Furthermore, for the submittal to be considered, pursuant to WAC 296-127-320, the Contractor and all Subcontractors shall file with the Owner by the same date certified copies of all payroll records relating to the additional amount due.

§ 9.3.1.4 Validity of Payment Requests. A payment request shall not be valid unless it complies with the requirements of the Contract Documents. If a separate payment request concerning a disputed amount does not comply with the requirements of the Contract, the Owner will provide a written statement to the Contractor stating why the disputed amount is not owed and/or why the separate payment request does not comply with the requirements of the Contract.

§ 9.3.1.5 Payments to Subcontractors. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, after making a request for payment but before paying a Subcontractor for its performance covered by the payment request, the Contractor discovers that part or all of the payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as for unsatisfactory performance or non-payment of sub-subcontractors), the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor, the Owner and the Architect written notice of the remedial actions that must be taken as soon as practicable after determining the cause for the withholding but before the due date for the Subcontractor payment, and pay the Subcontractor within eight working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of project specific materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in writing and in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. payment (except that title to demolition removed from the site shall not pass to the Owner). The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, 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 labor, materials and equipment relating to the Work.

§ 9.3.4 Retainage.

§ 9.3.4.1 In accordance with RCW 60.28, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. After award of a Contract for public improvements, or work for which retained percentages are required to be reserved under the provision of RCW 60.28, the Owner shall require the Contractor to exercise, in writing, one of the options listed below:

- .1 Retained percentages will be retained in a fund by the Owner not subject to release until sixty days following the Final Acceptance of the Work as completed and as provided in Section 9.10.6; or
- .2 Deposited by the Owner in an interest-bearing account in a bank, mutual savings bank or savings and loan association and not subject to release until sixty days following Final Acceptance of the Work as completed and as provided in Section 9.10.6; or
- .3 Placed in escrow with a bank or trust company and not subject to release until sixty days following the Final Acceptance of the Work as completed and as provided in Section 9.10.6.
- .4 If the Contractor provides a bond in place of retainage, it shall be in an amount equal to 5% of the Contract Sum plus change orders. The minimum requirements for the bond are that it must be on a form acceptable to the Owner, with an A.M. Best rating of "A Minus" or better and a financial rating of no less than "VII," and signed by a surety registered by the Washington State Insurance Commissioner and on the currently authorized insurance list published by the Washington State Insurance Commissioner; additional requirements as established by the Owner may be applied.

§ 9.3.4.2 The Contractor or a Subcontractor may withhold payment of not more than five percent (5%) as retainage from the monies earned by any Subcontractor or Sub-subcontractor, per RCW 60.28, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Owner, the Contractor shall specify the amount of retainage and interest due a Subcontractor.

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§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's approved Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial and Final Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Owner may, with or without the Architect's concurrence, withhold payment, and the Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, evidence or subsequent observations, it may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated unsatisfactory prosecution of the Work by the Contractor, including but not limited to failure to carry out the Work in accordance with the Contract Documents;
- .8 delay by the Contractor and/or its Subcontractor(s) of any tier, or failure to comply with the Contractor's Construction Schedule requirements;
- .9 failure to submit affidavits pertaining to wages paid as required by statute;
- .10 failure to submit a properly updated Construction Schedule;
- .11 failure to comply with a requirement of the Contract Documents in which the Owner has reserved the right to withhold payment;
- .12 liquidated damages;
- .13 failure to properly maintain and submit as-builts;
- .14 failure to properly submit daily construction records;
- .15 failure to properly submit certified payrolls; or
- .16 failure to properly submit any other documents required of the Contractor under the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 ~~If the Architect withholds certification for payment under Section 9.5.1.3, the~~ The Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.5.4 Pursuant to RCW 39.12, "Prevailing Wages on Public Works," the Contractor will not receive any payment until the Contractor and all Subcontractors of any tier for whom payment is sought have submitted state-approved "Statements of Intent to Pay Prevailing Wage" to the Owner. The statement must have the approval of the Industrial Statistician of the Department of Labor and Industries before it is submitted to the Owner. The statement must include the Contractor's registration number, the number of workers in each trade classification, and the applicable wage rate for each trade listed. The Contractor agrees to provide each Subcontractor of any tier with a schedule of applicable prevailing wage rates. The Contractor and the respective Subcontractors of any tier shall pay all fees required by the Department of Labor and Industries, including fees for the approval of the "Statement of Intent to Pay Prevailing Wages." Approved copies of the "Statement of Intent to Pay Prevailing Wages" must be posted where workers can easily read them.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, and it has been approved by the Owner, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect. Documents. The Owner will make a progress payment within thirty days of its receipt and approval of the Architect's Certificate for Payment; any payments made by or through the Office of the Superintendent of Public Instruction shall be made in accordance with the policies, procedures, and forms required by that office. The Owner shall be entitled to withhold payment to the extent provided by the Contract Documents, notwithstanding the issuance of a Certificate for Payment.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the ~~Owner~~ Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner. If the Contractor does not receive payment for any cause which is not the fault of a particular Subcontractor but does receive payment for materials supplied or Work performed by that Subcontractor, the Contractor shall pay that Subcontractor in accordance with its subcontract for its satisfactorily completed Work, less the retained percentage.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the ~~Contractor~~ Contractor, satisfactory to the Owner, that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, Work and the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of ~~Work not in accordance with the Contract Documents.~~ Work.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require

money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect ~~does not improperly fails to~~ issue a Certificate for Payment, through no fault of the Contractor, within ~~seven fifteen~~ days after receipt of the Contractor's ~~Application for Payment, timely and complete Application for~~ Payment under Section 9.3.1.2 (subject to the approved payment schedule), or if the Owner does not pay the Contractor within ~~seven twenty-one~~ days after the date established in the Contract Documents the amount ~~certified by the Architect or awarded by binding dispute resolution, due and owing to the Contractor~~, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. This right to stop Work does not apply in the case of the failure to issue a Certificate of Payment or to make payments for amounts in dispute. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and ~~start-up, plus interest start-up~~ as provided for in ~~the Contract Documents~~. Section 7.5 of these General Conditions.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the ~~Work Work, or phase thereof as defined by the~~ Contract Documents, when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that ~~the Owner can occupy or utilize the Work for its intended use that, subject to explicit exceptions provided in a phasing plan (such as, for example, planting of grass and a subsequently required growing season) the Owner can fully occupy or utilize the Work, or the designated phase thereof, for its intended use, including FF&E and student, teacher, and staff occupancy.~~ The fact that the Owner may occupy the Work or a designated portion thereof does not indicate that the Work is acceptable in whole or in part. All Work other than incidental corrective or punch list work and final cleaning shall be completed, including but not limited to the following:

- (1) Obtain applicable occupancy permits, including fire/life safety systems and health department approval, pressure vessel permits, elevator permits, and similar approvals or certificates by governing authorities and franchised services, assuring the Owner's full access and use of completed Work.
- (2) Submit the Contractor's punch list of items to be completed or corrected and written request for inspection.
- (3) Make final changeover of locks and transmit new keys to the Owner, and advise the Owner of the changeover in security provisions.
- (4) Discontinue or change over and remove unnecessary temporary facilities and services from the project site.
- (5) Advise the Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.
- (6) Meet all Substantial Completion requirements for that particular phase as described in the Contract Documents.
- (7) Complete final cleaning.

The Work of any particular phase is not Substantially Complete unless the Architect reasonably judges that the Work can achieve Final Completion within sixty days (or such other period of time as is specified in the Contract Documents), appropriate cleaning has occurred, utilities are not connected and operating normally, all required temporary occupancy permits, pressure vessel permits, elevator permits, and similar approvals or certificates by governing authorities and franchised services, assuring the Owner's full access to the Work have been issued, O & M manuals have been submitted for review, and the Work is accessible by normal vehicular and pedestrian traffic routes. The fact that the Owner may occupy the Work or a designated portion thereof does not indicate that the Work is Substantially Complete or is acceptable in whole or in part, nor does such occupation toll or change any liquidated damages due the Owner.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. The Contractor shall proceed promptly to complete and correct items on the list. The Contractor shall immediately clean-up any dust or debris created through punchlist Work activities. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, and upon verification by the Architect that all permits, approvals, testing, training and other submittals and administrative actions required under the Contract Documents for obtaining Substantial Completion have been satisfied, the Architect and, at its option, the Owner will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. If the Owner or Architect determines that the Work or designated portion is not substantially complete, the Contractor shall expeditiously complete the Work or designated portion, and again request an inspection. The Contractor shall pay the costs associated with this third and any further reinspections.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that which, upon approval of the Owner, shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. Completion, except that warranties for HVAC equipment shall commence with acceptance of the Commissioning Report by the Owner's Board of Directors. The Contractor shall attach and submit with the executed Certificate of Substantial Completion, the Certificate of Occupancy, as well as a written list of each outstanding and unresolved Claim; any Claim not so submitted and identified, other than retainage and the undisputed balance of the Contract Sum, shall be deemed waived and abandoned. If the Owner or Architect determines that the Work or designated portion is not Substantially Complete, the Contractor shall expeditiously complete the Work or designated portion, again request an inspection, and pay the costs associated with the re-inspection, including Architect and consultant fees.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and Any items not included by the Architect but required or necessary for Final Completion of the Contract shall be supplied and installed by the Contractor as a part of the Contract Sum, notwithstanding their not being recorded by the Architect. Upon written acceptance of the Certificate of Substantial Completion by the Owner and the Contractor, and upon the Contractor's Application for Payment and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof, as provided in the Contract Documents. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents. No further payment will be due or owing until the payment following Final Completion.

§ 9.8.6 The Contractor shall prepare, continue to monitor with the Architect, and cause to be completed, all punchlists with respect to the activity of each Subcontractor and report weekly to the Owner on outstanding punchlist items. Beginning thirty days before the scheduled date of Substantial Completion, the Contractor shall prepare reports weekly, identifying items to be completed in order to obtain required certificates of occupancy and make recommendations to the Owner with respect to effectuating the earliest possible completion. The Contractor shall include this report as a schedule item on its CPM schedule.

§ 9.8.7 The Contractor shall cause punch list items to be completed within twenty-one days of Substantial Completion of each phase (or such other period of time as is specified in the Contract Documents) or within such reasonable period as may be required to correct the item (in the event that the punch list items are, because of their nature, incapable of correction during that period) provided that the Contractor commences to correct the item within that period and thereafter diligently and in good faith pursues the corrective action to completion. If, at fourteen days after the Date of Substantial Completion of each phase, the Owner considers that the punch list items are unlikely to be completed within twenty-one days of the Date of Substantial Completion of each phase (or such other period of time as is specified in the Contract Documents), the Owner may, upon seven days' written notice to the Contractor, take over and perform some or all of the punch list items. If the Contractor fails to correct the deficiencies within the time period specified, the Owner may deduct the actual cost of performing this punch list work, including any design costs, plus 15% to account for the Owner's transaction costs from the Contract Sum.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may, upon written notice to the Contractor, take possession of, operate, occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. complete. Unless otherwise agreed in writing, such possession, use or operation shall not be deemed an acceptance of any portion of the Work, nor accelerate the time for any payment to the Contractor under the Contract, nor prejudice any rights of the Owner under the Contract or under any insurance, bond, guaranty or other requirement of the Contract, nor relieve the Contractor of the risk of loss or any of its obligations under the Contract, nor establish a Date of Substantial or Final Completion, nor establish a date for termination or partial termination of the running of liquidated damages, nor constitute a waiver of any Owner claims. If the Contractor fails to achieve Substantial Completion of the Work or designated portion within the Contract Time, or fails to achieve Final Completion of the Work within sixty days of Substantial Completion (or such other period of time as is specified in the Contract Documents), the Owner may take possession of, use or operate all or any part of the Work without an increase in the Contract Sum or the Contract Time on account of such possession or use. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect 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.

§ 9.9.3 Unless otherwise agreed upon, 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.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, acceptance, the Architect will promptly make such inspection and, when the Architect finds inspection accompanied by the Contractor (if requested by the Architect or Owner). If the Architect or Owner determines that some or all of the punch list items are not accomplished, the Contractor shall be responsible to the Owner for all costs, including re-inspection fees, for any subsequent Architect's inspection to determine compliance with the punch list. When the Architect finds all punch list items complete and the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that notify the Owner and the Contractor in writing that, to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. Documents. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.1.1 Commissioning of Operational Systems. The systems of the Work so designated in the Contract Documents are considered "Operational Systems." When the Contractor considers that all Operational Systems are complete and fully functional, up and running and ready for normal operation and functional performance testing (as all may be specified for any phases), and after all pre-commissioning checklists have been completed, the Contractor shall so notify the Owner in writing, no later than the Date of Substantial Completion for each building phase (or such other date as may be established in the Contract Documents) for that portion or phase as fixed in the Contract Documents. A reasonable period of time will then be allowed for the Commissioning Agent to schedule a pre-commissioning inspection and observe the functional performance tests of these systems identified in the Contract Documents to determine whether the Operational Systems are complete and ready for normal operation. If the Commissioning Agent's inspection discloses that the Operational Systems are not Substantially Complete or that any item is not in accordance with the requirements of the Contract Documents, the Contractor shall expeditiously complete or correct such item. The Contractor shall then submit a request for another inspection by the Commissioning Agent to

determine completion of the Operational Systems and pay the costs associated with the reinspection, including fees of the Commissioning Agent and the Architect and its consultants. When all of the Operational Systems are determined to be complete, the Commissioning Agent will notify the Owner in writing, which shall establish the Date of Commencement of Commissioning. Training of Owner personnel shall not begin until after the Date of Commencement of Commissioning and shall be conducted prior to departure of the installing entity from the site by appropriate Subcontractor personnel on site who are knowledgeable with the construction and operation of each system. Warranties on the Operational Systems required by the Contract Documents shall commence on the Date of Completion of Commissioning, unless otherwise provided, but the Contractor shall retain the responsibility to maintain the systems until Final Acceptance. The Date of Commencement of Commissioning shall not have an effect on the duties of the parties at Substantial Completion.

§ 9.10.1.2 The Contractor is liable for, and the Owner may deduct from any amounts due the Contractor, all Architect, engineer or other design consultant fees and all Commissioning Agent and Owner's Representative fees incurred by the Owner for services performed more than sixty days after Substantial Completion of all the Work (or such other period of time as is specified in the Contract Documents), whether or not those services would have been performed prior to that date had Final Completion been achieved in a timely manner.

§ 9.10.1.3 When the Architect finds that the Work has been concluded, a final occupancy permit has been issued, any commissioning process and validation process have been successfully concluded and the Commissioning Report has been accepted by the Owner's Board of Directors, and the Contractor has submitted all the items identified in Section 9.10.1.4 to the Architect, the Contractor may submit a final Application for Payment. The Architect will then promptly issue a final Certificate for Payment stating that the entire balance found to be due the Contractor and noted in said final Certificate is due and payable. The Architect's final Certificate for Payment shall establish the date of Final Completion upon its execution by the Owner.

§ 9.10.1.4 "Final Completion" will be attained when the Contractor has accomplished the following:

- (1) Complete all requirements listed in Section 9.8 for Substantial Completion.
- (2) Complete all remaining punch list items and remaining Work, and obtain approval by Architect and Owner that all Work is complete.
- (3) Obtain permanent occupancy permits (if only a temporary occupancy permit was issued at Substantial Completion).
- (4) Submit final change order and final Application for Payment.
- (5) Submit record documents, any final property survey, and operation and maintenance manuals required by the Contract Documents.
- (6) Deliver tools, spare parts, extra stock of material and similar physical items to the Owner as required by the Contract Documents.
- (7) Complete final cleaning after punchlist work (in addition to the final cleaning that was required to obtain Substantial Completion).
- (8) Complete instruction and training sessions on all major building systems including HVAC, intercom, data communications, fire alarm, telephone, fire sprinkler, emergency power, security and clocks.
- (9) Submit executed warranties.
- (10) Make final changeover of locks and transmit new keys to the Owner, and advise the Owner of the changeover in security provisions.
- (11) Discontinue or change over and remove temporary facilities and services from the project site.
- (12) Advise the Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.
- (13) Acceptance of the final Commissioning Report by the Owner's Board of Directors.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that after the Owner's Board of Directors has formally accepted the Project ("Final Acceptance"). To achieve Final Acceptance, the Architect must have issued a final Certificate for Payment under Section 9.10.1.3, an occupancy permit must have been issued, Final Completion must have occurred, and the Contractor must have submitted to the Architect and the Owner the following:

- (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, except for any claims that are

- specifically identified on the affidavit (Affidavit of Payment of Debts and Claims, AIA form G706 or equivalent),
- (2) 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 30-forty-five days' prior written notice has been given to the Owner,
 - (3) 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,
 - (4) consent of surety, if any, to final payment and (5), if required by the Owner, (AIA form G707 or equivalent),
 - (5) other data establishing payment or satisfaction of or protection against 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. Owner (Contractor's Affidavit of Release of Liens, AIA form G706A or equivalent). 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-fees,
 - (6) pursuant to RCW 39.12.040, an "Affidavit of Wages Paid" from the Contractor and from each Subcontractor of any tier certified by the Industrial Statistician of the Washington State Department of Labor and Industries, with the fees paid by the Contractor or Subcontractor,
 - (7) a letter from the Architect indicating that the Work is complete and recommending Final Acceptance of the Project by the Owner,
 - (8) certification that the materials in the Work are "lead-free" and "asbestos-free,"
 - (9) a certified statement that the Contractor has closed all necessary permits or otherwise met the requirements of all governing jurisdictions related to this project, including but not limited to all city or county departments, health districts and utility districts, provided to Owner with a copy of all closed or signed off permits,
 - (10) record documents;
 - (11) all warranties, guarantees, training, manuals, operation instructions, certificates, spare parts, maintenance manuals and stock, specified excess material, as-built drawings and other documents, training or items required by the Contract Documents or local governmental entities; and
 - (12) all submittals and information sufficient for the Owner to submit apprenticeship utilization data as required by RCW 39.04.320(5)(a).

Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance.

§ 9.10.3 If, after Substantial Completion of the Work, ~~final completion thereof~~ Final Completion is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting ~~final completion,~~ Final Completion, and the Architect so confirms, the Owner shall, ~~may,~~ upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. ~~If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.~~

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, statutory retainage, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 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 and attached to the Contractor's final Application for Payment.~~

§ 9.10.6 Release of Retainage: The retainage will be held and applied by the Owner as a trust fund in a manner required by RCW 60.28. Release of the retainage will be processed in ordinary course of business upon the expiration of sixty days following Final Acceptance of the Work by the Owner provided that no notice of lien shall have been given as provided in RCW 60.28, that no claims have been brought to the attention of the Owner and that the Owner has no claims under this Contract; and provided further that, for state-funded projects, release of retention has been duly authorized by the State. The following items must also be obtained prior to release of retainage: pursuant to RCW 60.28, a certificate from the Department of Revenue; pursuant to RCW 50.24, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries.

§ 9.10.7. Change Orders. The execution of a Change Order shall constitute a waiver of Claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order. Reservations of rights will be deemed waived and are void unless the reserved rights are specifically described in detail to the satisfaction of the Owner and are initialed by the Owner. If the Contractor adds a reservation of rights that has not been initialed by the Owner to any Change Order, Construction Change Directive, Change Order proposal, Application for Payment or any other document, all amounts therein shall be considered disputed and not due or payable unless and until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and in all cases initialed by the Owner. If the Owner makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initialed by the Owner to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

§ 9.10.8 If a Subcontractor of any tier refuses to furnish a release or waiver required by the Owner, the Owner may (a) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (b) accept a bond from the Contractor, satisfactory to the Owner, to indemnify the Owner against such lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Owner all moneys that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.9 The Contractor and all Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, emails, faxes, logs, schedules, and other tangible and electronic data and other evidence relating or pertaining to the costs and/or performance of the Contract ("records") to such extent and in such detail as will properly reflect and fully support compliance with the requirements of the Contract Documents and with all costs, charges and other amounts of whatever nature. The Contractor shall preserve such records for a period of three years following the date of Final Acceptance under the Contract and for such longer period as may be required by any other provision of the Contract. Within seven days of the Owner's request, the Contractor agrees to make available at the office of the Contractor during normal business hours all records for inspection, audit and reproduction (including electronic reproduction) by the Owner or its representatives. These requirements shall also be applicable to each Subcontractor of any tier and included in each Subcontract and purchase order issued with respect to the Work, except fixed-price Subcontracts where the price is \$25,000 or less. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under RCW 42.56 will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Owner. Failure to fully comply with any requirements of this Section shall constitute a material breach of contract and shall constitute a waiver of all claims by the Contractor and any Subcontractor that does not fully comply.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall have the right to control and shall be solely and completely responsible for conditions of the Work site, including safety of all persons and property, during performance of the Work. The Contractor shall maintain the Work site and perform the Work in a manner that meets statutory and common-law requirements for the provision of a safe place to work. This requirement shall apply continuously and not be limited to working hours. Any review by the Owner, Owner's Representative, or the Architect of the Contractor's performance shall not be construed to include a review of the adequacy of the Contractor's safety measures in, on or near the site of the Work.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on or involved in the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.1.1 Prior to commencement of the Work, the Contractor shall review the Owner's safety plan and then prepare and submit in a meeting with the Owner, Architect and Owner's Representative, the Contractor's Safety Manual for the Project. The Contractor's Safety Manual shall be consistent with the Owner's safety plan and shall consider the needs of students, staff and Owner operations, as well as the needs of the general public. If it is determined that element(s) of the Contractor's Safety Manual is/are inconsistent with the Owner's safety plan, such inconsistency shall be resolved in favor of the requirements of the Owner's all hazard plan. The Contractor's Safety Manual shall include the following minimum elements: a written safety plan that is consistent with the requirements of the Contract Documents; a process for submitting accident and other reports; an emergency response plan; a resume of the Contractor's safety representative; a hazardous materials communication program; any indicated specialized programs for specific Project site hazard analysis; an environmental waste disposal plan; a drug and alcohol plan; safety training programs; and elements necessary to comply with any applicable local laws, regulation and other legal requirements. No action or inaction of the Architect, Owner's Representative, Project Manager, or Owner relating to safety, property protection, any element of the Contractor's Safety Manual or related performance, or violation thereof shall in any way: (1) relieve the Contractor of sole and complete responsibility for the violation and the correction thereof, or of sole liability for the consequences of said violation; (2) impose any obligation upon the Owner, Owner's Representative, Project Manager, or Architect to inspect or review the Contractor's safety program or precautions or to enforce the Contractor's compliance with the requirements of this Article 10; (3) impose any continuing obligation upon the Owner, Owner's Representative, Project Manager, or Architect to ensure the Contractor performs the Work safely or to provide such notice to the Contractor or any other person or entity; (4) affect the Contractor's sole and complete responsibility for performing the Work safely or the Contractor's responsibility for the safety and welfare of its employees and the employees of Subcontractors of any tier; or (5) affect the Contractor's responsibility for the protection of property, students, staff and the general public.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss. The Contractor shall comply with all notices and comply with all requests from the Owner regarding the safety and protection of the Owner's students and staff. The Contractor shall comply with the safety regulations set forth in "Safety Standards for Construction" and "General Safety Standards" and any other requirements published by the Washington State Department of Labor and Industries. The Contractor shall comply with the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions, amendments and regulations issued thereunder, and the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA), including all revisions, amendments and regulations issued thereunder by the Washington State Department of Labor and Industries. The WISHA regulations shall apply to all excavation, trenching and ditching operations. In case of conflict between any such requirements, the more stringent applicable regulation or requirement shall apply.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities. The Contractor shall maintain at the work site office or other well-known place at the work site all materials (e.g., a first aid kit) necessary for giving first aid to the injured, and shall establish, publish and make known to all employees procedures for ensuring immediate removal to a hospital or a doctor's care, persons, including employees, who may have been injured on the site. Employees shall not be permitted to work on the site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care. The Contractor and/or any Subcontractors shall ensure that at least one of such employees has a valid, effective first aid card.

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§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, Work and explicitly permitted by the Contract Documents, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition. At all times until the Owner's occupancy of the Work or a designated portion of the Work, the Contractor shall protect from damage, weather, deterioration, theft, vandalism and malicious mischief and shall bear the risk of any uninsured loss or destruction of, or injury or damage to, all materials, equipment, tools, and other items incorporated or to be incorporated in the Work or designated portion, or consumed or used in the performance of the Work or designated portion, and all Work in process and completed Work or designated portion. The Contractor is responsible for any deductible amounts related to any insurance coverage.

§ 10.2.7.1 Any notice given to the Contractor by the Owner or the Architect of a safety or property protection violation will not: (1) relieve the Contractor of sole and complete responsibility for the violation and the correction thereof, or for sole liability for the consequences of said violation; (2) impose any obligation upon the Owner or Architect to inspect or review the Contractor's safety program or precautions or to enforce the Contractor's compliance with the requirements of this Article 10; or (3) impose any continuing obligation upon the Owner or Architect to provide such notice to the Contractor or any other persons or entity.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party the Contractor suffers injury or damage to person or property because of an alleged act or omission of the other party, Owner, or of others for whose acts such party is the Owner may be legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party-Owner within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter. This Section does not apply to Claims, damages for additional costs or time, acceleration, or delay.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a hazardous material or substance, as defined by CERCLA, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing. The Contractor shall proceed with the Work in areas not affected.

§ 10.3.2 Upon receipt of the Contractor's written notice, and with the Owner's agreement, the Owner shall obtain the services of a licensed laboratory to reasonably verify the presence or absence of the material or substance reported by the Contractor that is not the Contractor's responsibility under the Contract Documents and, in the event such material or substance is found to be present, to cause it to be reasonably verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable

objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable ~~objection~~, objection, but the Owner shall not be responsible for any delay resulting from the Contractor's objection to such person or entity. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time ~~shall~~ may be extended appropriately and the Contract Sum ~~shall~~ may be increased in the amount of the Contractor's demonstrated and reasonable additional costs of shut-down, delay and start-up and start-up, which adjustments shall be accomplished as provided in Articles 7, 8 and 15.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking ~~indemnity~~ indemnity or if the removal of such material or substance was a part of the Contractor's Work.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's ~~fault~~ fault, misuse, or negligence in the use and handling of such materials or substances. The Contractor shall store all hazardous materials safely, whether or not required by Contract Documents. The Contractor shall not install hazardous materials, including without limitation asbestos, lead, mercury, or polychlorinated biphenyl (PCB), in the Work except as explicitly required by the Contract Documents.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without ~~fault or negligence on the part of the Contractor, and if the remediation was not a part of the Contractor's scope of Work under the Contract Documents,~~ the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.3.7 To the extent that this Agreement requires the Contractor to perform Work relating to hazardous materials, such are identified in the Contract Documents. The Contractor is responsible to take all reasonable precautions to prevent foreseeable bodily injury or death resulting from such materials or substances, and to dispose of such materials as required by the Contract Documents and all applicable state and federal laws and regulations. The Contractor shall defend, indemnify, and hold harmless the Owner, the Architect, and their respective agents, employees, consultants, successors and assigns from and against any and all claims to the extent of the Contractor's failure to abide by such Contract Documents and all applicable state and federal laws and regulations.

§ 10.3.8 To the extent this Project involves the remediation of contaminated property, the Contractor shall comply with RCW 64.44 and 70.105D and any provisions of the Washington Administrative Code promulgated thereunder, including the use of authorized contractors as provided in RCW 64.44.060. The Contractor shall comply with all applicable requirements of RCW 70.95 and any provisions of the Washington Administrative Code promulgated thereunder.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

§ 10.5 PUBLIC SAFETY AND CONVENIENCE

§ 10.5.1 The Contractor shall conduct its Work so as to ensure the least possible obstruction to vehicular traffic and inconvenience to the general public and others in the vicinity of the Work and to ensure the protection of persons, property and natural resources. No road or street shall be closed to the public except with the permission of the Owner and the proper governmental authority. Fire hydrants on or adjacent to the Work shall be accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor to ensure the use of sidewalks, fire lanes, private and public driveways and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses, if any, on the Work site.

§ 10.6 WEATHER PROTECTION

§ 10.6.1 Temporary weather protection of the Work is the responsibility of the Contractor as necessary to proceed in accordance with the Contractor's approved schedule and environmental conditions. Weather protection shall include but not be limited to protection of soils, subgrade preparation, exterior concrete, masonry, sealant, gypsum sheathing, roofing, and interior finishes. Delays and costs resulting from the Contractor's failure to protect the Work from damage due to weather are the sole responsibility of the Contractor.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized and admitted to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 — Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 — Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 — Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 — Claims for damages insured by usual personal injury liability coverage;
- .5 — Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 — Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; possessing a Best's policyholder's rating of A- or better and a financial rating of no less than IX and reasonably acceptable to the Owner, an occurrence-based Commercial General Liability Insurance Policy, which shall provide personal injury, bodily injury and property damage liability to cover the Contractor's operations, including Subcontractors and suppliers of any tier; advertising injury; automobile liability insurance policy, including but not limited to owned, non-owned and hired vehicles; on Work the Contractor may subcontract or sublet to others; and on the indemnity provisions of this Contract, including but not limited to premises, products/completed operations, personal injury, blanket contractual liability, explosion, collapse or underground (XCU), employment related practices coverage, and stopgap employer's liability. The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect, their consultants and employees, any required governmental agencies and others designated in the Contract Documents as additional insureds for claims arising out of or caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations, and this insurance shall include a severability of interest (cross liability clause) for Work performed under this Contract. The Contractor's policy shall be designated primary and non-contributory coverage for both defense and indemnity, and any Owner's policies excess. Such limits of liability insurance shall have per project general aggregate provisions and shall not be less than the following:

- .1 — Comprehensive General Liability, Bodily Injury and Property Damage Liability, including Premise and Operations, Independent Contractors, Protective Liability, Completed Operations and Products, Contractual, Combined Single Limit of at least \$1,000,000 per occurrence, with a per-project aggregate limit of at least \$2,000,000; and

- ~~7~~ — Claims for bodily injury or property damage arising out of completed operations; **2 Comprehensive Automobile Liability, Bodily Injury and Property Damage Combined Single Limit of at least \$1,000,000; and**
- ~~8~~ — Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18; **3 In addition, the Contractor shall maintain an umbrella policy which provides excess limits following form over the primary layer, in an amount not less than \$5,000,000.**

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. ~~Coverages, whether written on an occurrence or claims-made. If existing policy(s) provide higher limits than those specified herein, the higher limits shall be applicable and the certificates should reflect those higher limits. Coverages shall be written on an occurrence basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment~~ Final Acceptance and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents. ~~payment. Completed operations coverage shall remain in force for six years after Final Acceptance. The insurance described above shall include coverage for underground, collapse and explosion exposures. In addition, the Contractor shall purchase and maintain insurance for claims under workers' compensation (industrial insurance), disability benefit and other similar employee benefit acts in the State statutory amount and Stop Gap Liability Insurance (Employer's Contingent Liability Insurance) with coverage of at least \$1,000,000 each occurrence/each accident. All policies and certificates must be signed copies and the Contractor shall provide written notice by certified mail to the Owner and Architect 45 days before the policies expire or are cancelled or any coverages afforded under the policies are reduced, limits decreased, or the additional insureds removed. The Contractor shall furnish to the Owner and Architect copies of any subsequently issued endorsements amending, modifying, altering or restricting coverage or limits. Furthermore, such policies or certificates shall contain a clause verifying that the policy contains coverage for blanket contractual liability including both oral and written contracts and that liability coverages include protection for underground, collapse and explosion and that the indemnification provisions of Section 3.18 are acknowledged. Losses up to the deductible amount or otherwise not covered by insurance shall be the responsibility of the Contractor.~~

§ 11.1.3 PROOF OF INSURANCE

§ 11.1.3 ~~Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. Before any presence on site, commencing Work or exposure to loss can occur, or, in any event, within ten days after the Owner has issued its Conditional Notice to Proceed, the Contractor shall furnish the Owner with four copies of Certificates of Insurance on AIA Document G705 or ACORD Certificate of Liability Insurance as evidence of all insurance required by the Contract Documents, including an endorsement to the insurance policies naming the Owner, the Architect, their consultants and employees, any required governmental agencies and others designated in the Contract Documents as additional insureds for ongoing operations using (ISO CG 2038 Form or its equivalent) and on the Completed Operations coverage (ISO CG 2037 Form or its equivalent). If the Agreement is executed, no Progress Payment will be due until all such Certificates are furnished. The Contractor shall furnish to the Owner and Architect copies of any subsequently issued endorsements amending, modifying, altering or restricting coverage limits. Furthermore, such policies or certificates shall contain a clause verifying that the policy contains coverage for blanket contractual liability including both oral and written contracts and that liability coverages include protection for underground, collapse and explosion and that the indemnification provisions of Section 3.18 are acknowledged. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness. Upon written request, the Contractor will provide a copy of its policies to the Owner.~~

§ 11.1.3.1 The Owner's specification or approval of the insurance in this Contract or of its coverage or amount shall not relieve or decrease the liability of the Contractor under the Contract Documents or otherwise. Coverages are the minimum to be provided and are not limitations of liability under the Contract, indemnification, or applicable law provisions. The Contractor may, at its expense, purchase larger coverage amounts. Notwithstanding anything herein to

the contrary, the Contractor shall provide all bonding, insurance, and permit documentation as required by governmental entities for all portions of the Project.

§ 11.1.4 The Contractor shall ensure and require that Subcontractors of any tier have insurance coverage to cover bodily injury and property damage on all operations and all vehicles owned or operated by Subcontractors of all tiers in the minimum amount of \$1,000,000 per occurrence with a \$2,000,000 aggregate limit. Also, the Subcontractors shall name the Contractor and the Owner and cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; operations under CG 2038 or its equivalent; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations; operations under form CG 2037 or its equivalent.

§ 11.1.5 If the Owner is damaged by the failure of the Contractor to maintain any of the insurance in this Article 11 or to so notify the Owner, then the Contractor shall bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance. Failure to withhold payment shall not constitute a waiver.

§ 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner-The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form to cover the course of construction in the amount of the initial Contract Sum, Sum plus sales tax, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles, less costs of clearing, preparation and excavation of the site under this Agreement. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project. Each loss may be subject to a deductible of no greater than \$25,000. Losses up to the deductible amount or otherwise not covered by insurance shall be the responsibility of the Contractor, unless the loss was caused by the Owner or Architect or by a natural disaster, in which case the Owner shall be liable for up to \$25,000.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner-Contractor does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner-Contractor shall so inform the Contractor-Owner in writing prior to commencement of the Work. The Contractor-Owner may then effect insurance that will protect the interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner-Contractor. If the Contractor-Owner is damaged by the failure or neglect of the Owner-Contractor to purchase or maintain insurance as described above, without so notifying the Contractor-Owner in writing, then the Owner-Contractor shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit. All tools and equipment of the Contractor and Subcontractors of any tier not intended as part of the construction or installation of the Work will be the sole responsibility of the Contractor.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner-Contractor shall file with the Contractor-Owner a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor-Owner.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, 11.3, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner does not waive the subrogation rights to the extent of its property insurance on structures or portions of structures that do not comprise the Work. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Owner shall distribute the proceeds so received in accordance with such agreement as the parties in interest may reach. If no agreement is reached, any damaged Work shall first be repaired or replaced, and payment therefor made from the separate account by Change Order or by

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payment to a separate contractor, at Owner's option; further disbursements will then be determined pursuant to the provisions of Section 4.4. 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. Any inconsistent policy provisions will supersede the provisions of this Section.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering **Contractors' Bonds**. The Contractor shall secure and pay for as a part of the Contract Sum from a surety company acceptable to the Owner, with an A.M. Best rating of "A-" or better and a financial rating of no less than "VII," licensed in the State of Washington, bonds covering the faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract, under the Contract Documents, each in the full amount of the Contract Sum plus sales tax, pursuant to RCW 39.08, "Contractor's Bond." Within forty-eight hours after the Owner's issuance of the notice of intent to award the Contract, the Contractor shall deliver evidence of its bondability to the Owner. Within three days after its execution of the Contract, the Contractor shall deliver the originals of the bonds to the Owner and one copy to the Architect. **THE OWNER MAY DECLINE TO ENTER INTO THE CONTRACT IF THE REQUESTED EVIDENCE OF BONDABILITY IS NOT RECEIVED. THE OWNER ALSO MAY WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED.** Evidence of bondability shall include the percentage to be paid by the Contractor for increases in the Contract Sum.

§ 11.4.1.1 Mechanical and Electrical Subcontractors' Payment and Performance Bonds. Within forty-eight hours after the Owner's issuance of the notice of intent to award the Contract, the first-tier mechanical Subcontractor(s) (both wet and dry, but not including any fire sprinkler Subcontractor) and the first-tier electrical Subcontractor (but not low voltage, smoke/fire alarm, or data/communication Subcontractors) shall each deliver evidence of their payment and performance bondability to the Owner through the Contractor. The evidence shall include a letter from the bonding company that includes the price of a payment and performance bond to be issued during the 30-day period after the conditional notice to proceed. The surety company must be acceptable to the Owner and admitted and licensed in the State of Washington, with an A.M. Best rating of "A-" or better and a financial rating of no less than "VII." The bond(s), if required by the Owner, shall be in an amount equal to the full contract sum of the subcontract between the Subcontractor and the Contractor but shall not include sales tax. The bonds shall be conditioned that the Subcontractor shall faithfully perform all the provisions of its subcontract, payment of all obligations arising thereunder, and for one year's maintenance for correction of defective work. If the Owner elects to require a payment and performance bond from one or more of these Subcontractors, it will so notify the Contractor in writing within 21 days of receipt of the evidence of bondability from the respective Subcontractor, in which case the Contract Sum shall be increased by a Change Order in the amount specified in the letter, unless otherwise agreed by the parties. The Owner shall not be responsible for the costs of any Subcontractor bonds it requires until the Owner receives a copy of the bond. **THE OWNER MAY DECLINE TO ENTER INTO THE CONTRACT OR MAY REQUIRE A CHANGE OF SUBCONTRACTOR AT NO INCREASE IN THE CONTRACT SUM OR CONTRACT TIME IF THIS EVIDENCE OF BONDABILITY IS NOT RECEIVED. THE OWNER MAY WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED.** The

Subcontractors responsible to the Contractor for the work listed must comply with the above Section to the extent directed by the Owner.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.5 If the Owner is damaged by the failure of the Contractor to maintain any of the bonds or insurance in this Article 11 or to so notify the Owner, then the Contractor shall bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance and bonds. Failure to withhold payment shall not constitute a waiver.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's or the Owner's request or to requirements of a governmental authority or as otherwise specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, Owner or governmental authority, be uncovered for the Architect's requesting party's examination and be replaced at the Contractor's expense without change in the Contract Time or Contract Sum.

§ 12.1.2 If a portion of the Work has been covered that the Architect, Architect, Owner or governmental authority has not specifically requested to examine prior to its being covered, the Architect covered and for which neither the Contract Documents nor governmental laws or regulations required inspection, the Architect, Owner or governmental authority may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner employed by the Owner, and in that event the Owner or the separate contractor shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or Owner or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's and Owner's consultants' services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the later of the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, the Contract Documents, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it according to the requirements of this Section 12.2.2 with no change in the Contract Sum promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

If the Contractor does not promptly in accordance with the provisions of this Section 12.2.2 initiate work to correct the Work designated in the notice, the Owner may proceed to correct the Work, the Owner may without further notice dispose of materials and equipment as it sees fit, and the Contractor will be liable for all associated costs. This obligation shall survive acceptance of the Work under the Contract and termination of the Contract, is in addition to other warranties provided by contract or law, and does not establish a time limit for damages.

.1 If, in the Owner's opinion, the nonconforming Work either prevents the use of a portion of the facility and/or immediate response is required to prevent further damage or to restore security to prevent

external entrance, and/or is a safety hazard (e.g., break in the waterline, sprinkler system failure, failure of the heating system, inability to close or lock exterior door, etc.), the Contractor shall initiate corrective work on site the same day if the Contractor is notified prior to noon, or by noon the following day if notified after noon, and shall complete corrective action within forty-eight hours.

.2 If, in the Owner's opinion, the nonconforming Work has the potential of becoming a safety hazard, of affecting internal security, or of limiting the use of the facility (e.g., potential loss of heat in a single classroom, failure of one or more plumbing fixtures, loose carpet seam in corridor, interior door lock not working, etc.), the Contractor shall initiate corrective work on site within two working days and shall complete corrective action within five working days.

.3 If, in the Owner's opinion, the nonconforming Work does not have an impact on the use of the building, but must be fixed, (e.g., interior door closer broken, window cracked, wall covering seam coming loose, etc.), the Contractor shall initiate corrective work on site within fourteen days and shall complete corrective action within twenty-eight days.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 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.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that 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 Sum will be reduced as appropriate and equitable, by the greater of the (1) cost of correction or (2) diminution of value of the Work that is not in accordance with the requirements of the Contract Documents. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the internal law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4. located, without regard to its choice of law provisions. The venue for any litigation shall be in Superior Court for the county in which the project is located.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.2.3 If a majority of the ownership or the control of Contractor is acquired by a third party, and such acquisition reasonably imperils performance or creates a conflict of interest that the Owner, in its sole discretion, cannot reasonably reconcile, then the Owner may terminate this Contract at any time pursuant to Section 14.2, except that the Owner shall give the Contractor thirty days written notice of termination and the opportunity for the Contractor to cure prior to termination.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to ~~a member of the firm or entity, or the designated representative as identified in Sections 8.3 and 8.4 of the A101, or to an officer of the corporation for which it was intended;~~ intended if the Designated Representative no longer works for that party and a new Designated Representative has not been identified; or if delivered at, or sent by facsimile, email, registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice. The date of written notice shall be the earlier of the date of personal delivery, actual receipt by facsimile or email, or three calendar days after the date of postmark.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law. The Contractor's sole remedy for Claims, disputes and other matters in question of the Contractor, direct or indirect, arising out of, or relating to, the Contract Documents or breach thereof, except Claims which have been waived under the terms of the Contract Documents, however, is the dispute resolution procedure of Article 15.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.4.3 If any portion of this Contract is held to be void or unenforceable, the remainder of the Contract shall be enforceable without such portion.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made at an appropriate time and as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. ~~authorities having jurisdiction shall be made at an appropriate time.~~ Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to or provided by the Owner, or with the appropriate public authority, and the Owner shall bear all related costs of tests, ~~inspections and approvals.~~ necessary tests, inspections and approvals, except that the Contractor will be responsible for any costs of retesting and any extra costs caused by the Contractor. The Contractor shall give the Architect and Owner timely notice of when and where tests and inspections are to be made so that the Architect and Owner may be present for such procedures. The independent testing agency shall prepare the test reports, logs and certificates applicable to the specific inspections and tests and promptly and simultaneously deliver the specified number of copies of them to the designated parties. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Owner and Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal 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 Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to authorities having jurisdiction, the Owner, and the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall provide the Owner and Architect at least forty-eight hours' notice prior to all tests and inspections.

§ 13.5.7 If the Owner is responsible under the Contract Documents, law or regulation to pay only for an inspection of any inspector, consultant or Architect, the Owner shall be required to pay only for the first actual inspection. If the Contractor arranges for an inspection and an extra cost is incurred because the inspector is required to wait, to leave without inspecting, to perform a partial inspection, to return to complete or reinspect, or otherwise to expend time other than for the primary inspection, the Contractor shall be responsible for all such costs to the extent caused by the Contractor. If the Contractor does not pay the charges for which it is responsible within thirty days of billing, the Owner has the option to pay the charges directly and backcharge the Contractor on the next progress payment for the amount paid plus a 10% handling fee.

§ 13.5.8 No acceptance by the Owner of any Work shall be construed to result from any inspections, tests or failures to inspect or test by the Owner, the Owner's representatives, the Architect or any other person. No inspection, test, failure to inspect or test, or failure to discover any defect or nonconformity by the Owner, the Owner's representatives, the Architect or any other person shall relieve the Contractor of its responsibility for meeting the requirements of the Contract Documents or impair the Owner's right to reject defective or nonconforming items or right to avail itself of any other remedy to which the Owner may be entitled, notwithstanding the Owner's knowledge of the defect or nonconformity, its substantiality or the ease of its discovery. Entities performing inspections and/or testing do not have the authority to direct the Contractor's means and methods and are not agents or representatives of the Owner or Architect. Inspections which meet the requirements of code shall not override the requirements of the Contract Documents, which may be more stringent.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest ~~from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located as specified in the A101 Agreement.~~

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the ~~Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work.~~ Agreement, and within the shorter of the time period specified by applicable law and the time limits identified in this Agreement. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

§ 13.8 STATUTES AND OTHER REQUIREMENTS

The Contractor shall abide by the provisions of all applicable Washington statutes and regulations. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be a complete list and should not be relied upon as such.

§ 13.8.1 Contractor Registration and Related Requirements. Pursuant to RCW 39.06, "Registration, Licensing of Contractors," the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors." The Contractor shall: have a current state

unified business identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required in Title 51 RCW; have an employment security department number as required in Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW, and; not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).

§ 13.8.2 Law Against Discrimination. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Discrimination."

§ 13.8.3 Provisions for Aged and Handicapped Persons. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.

§ 13.8.4 Safety Standards. The Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."

§ 13.8.5 Unemployment Compensation. Pursuant to RCW 50.24, "Contributions by Employers," in general and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for a bond acceptable to the commissioner.

§ 13.8.6 Drug-Free Workplace. The Contractor and all Subcontractors of any tier shall fully comply with all applicable federal, state, and local laws and regulations regarding drug-free workplace, including the Drug-Free Workplace Act of 1988. Any person not fit for duty for any reason, including the use of alcohol, controlled substances, or drugs, shall immediately be removed from the Work.

§ 13.8.7 Tobacco-Free Environment. Pursuant to RCW 28A.210.310, smoking or use of any kind of lighted pipe, cigar, cigarette, vaping, or any other lighted smoking equipment, material or smokeless tobacco products is prohibited on all school district property.

§ 13.8.8 Weapons-Free Environment. The Contractor and its employees, agents, and Subcontractors of any tier shall not bring onto the Project site or onto any Owner property any firearm or any other type of weapon described in either RCW 9.41.280(1) or RCW 9.41.250. Any person violating this Section shall immediately be removed from the Work, and such a violation shall be grounds for a termination of this Agreement for cause at the Owner's discretion.

§ 13.8.9 Asbestos Removal. To the extent this Project involves asbestos removal, the Contractor shall comply with Chapter 49.26 RCW, "Health and Safety--Asbestos," and any provisions of the Washington Administrative Code promulgated thereunder, and the applicable section of the Specifications should be viewed for possible insurance required for the applicable Subcontractor.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Except as provided by RCW 60.28.080, the Contractor may terminate the Contract if the Work is stopped for a period of 30-sixty consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has improperly not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the

Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and ~~Architect~~, Architect (during which period the Owner has the opportunity to cure), terminate the Contract and recover from the Owner payment for Work ~~executed, including reasonable overhead and profit, properly executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed, direct costs incurred by reason of such termination, and damages-direct damages. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.~~

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the ~~Architect~~, Architect (during which period the Owner shall have the opportunity to cure), terminate the Contract and recover from the Owner as provided in Section 14.1.3. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner ~~may terminate the Contract if the Contractor may, upon seven days' written notice to the Contractor, terminate (without prejudice to any right or remedy of the Owner) the whole or any portion of the Work or the Contract for cause if the Contractor:~~

- .1 ~~repeatedly~~ refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make prompt payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 ~~repeatedly disregards~~ fails to comply with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public ~~authority; authority having jurisdiction; or~~
- .4 fails to prosecute the Work or any portion thereof with sufficient diligence to ensure the Substantial Completion of the Work within the Contract Time; or
- .5 is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency; or
- .6 fails to comply with the provisions of RCW 28A.400.330 by permitting a worker on the Project having contact with children who has been convicted of or pled guilty to a felony crime involving children as described in Section 3.4.3; or
- .7 otherwise is guilty of a material or substantial breach of or default under a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, ~~upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, Owner may~~ without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor on all or a portion of the Work and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the ~~Work~~. Work; and
- .4 Take or direct any or all of the actions in Section 14.5.1.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case

may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.~~survive termination of the Contract.~~

§ 14.2.5 If the Owner terminates a portion of the Work, the Contractor shall continue the performance of the remainder of the Work in accordance with the Contract Documents to the extent not terminated.

§ 14.2.6 If, after the Contractor has been terminated pursuant to this Section 14.2 or otherwise for cause, it is determined that none of the circumstances set forth in Section 14.2.1 exists, then such termination shall be considered a termination for convenience pursuant to Section 14.4.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for ~~increases~~ changes in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall ~~include profit.~~ be consistent with the terms of the Contract Documents. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate (without prejudice to any right or remedy of the Owner) the whole or any portion of the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment ~~for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.~~ consistent with the Contract Documents for Work properly executed, and costs necessarily incurred by reason of such termination (such as the cost of settling and paying claims arising out of the termination of Work under subcontracts or orders), along with reasonable profit on the Work not executed, not to exceed two and a half percent (2.5%) of the Cost of the Work not performed. The total sum to be paid to the Contractor under this Section 14.4 shall not exceed the Contract Sum as reduced by the amount of payments otherwise made, by the larger of (1) the actual value or (2) the scheduled value of Work not terminated, and as otherwise permitted by this Contract. The amounts payable to the Contractor shall exclude the fair value of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the Owner or to a buyer pursuant to Sections 14.5.1.6 or 14.5.1.7.

§ 14.5 EFFECTS OF TERMINATION BY OWNER

§ 14.5.1 Unless the Owner directs otherwise, after receipt of a Notice of Termination from the Owner pursuant to Section 14.2 or 14.4, the Contractor shall promptly:

- .1 stop Work under the Contract on the date and as specified in the Notice of Termination;
- .2 place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of any portion of the Work that is not terminated;
- .3 procure cancellation of all orders and subcontracts, upon terms acceptable to the Owner, to the extent that they relate to the performance of Work terminated;
- .4 assign to the Owner all of the right, title and interest of the Contractor under all orders and subcontracts, as directed by the Owner, in which case the Owner shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

- .5 with the Owner's approval, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts not assigned to the Owner;
- .6 transfer title and deliver to the entity or entities designated by the Owner the fabricated or unfabricated parts, Work in process, partially completed supplies and equipment, materials, parts, tools, dies, jigs and other fixtures, completed Work, supplies and other material produced as part of, or acquired in connection with the performance of, the Work terminated, and the completed or partially completed plans, drawings, information and other property related to the Work;
- .7 use commercially reasonable efforts to sell any property of the types referred to in Section 14.5.1.6. The Contractor shall not be required to extend credit to any buyer, and may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner, and the proceeds of any such transfer or disposition may be applied in reduction of any payments to be made by the Owner to the Contractor;
- .8 take such action as may be necessary or as directed by the Owner to preserve and protect the Work and property related to this Project in the possession of the Contractor in which the Owner has an interest; and
- .9 continue performance only to the extent not terminated.

§ 14.5.2 In arriving at any amount due the Contractor after termination, the following deductions shall be made:

- .1 all unliquidated advance or other prior payments on account made to the Contractor applicable to the terminated portion of the Contract;
- .2 any claim the Owner may have against the Contractor;
- .3 an amount necessary to protect the Owner against outstanding or potential liens or claims; and
- .4 the agreed price for or the proceeds of sale of any materials, supplies or other things acquired by the Contractor or sold, pursuant to the provisions of Section 14.5.1.7, and not otherwise recovered by or credited to the Owner.

§ 14.5.3 If (and only if) the termination pursuant to Section 14.4 is partial, the Contractor may file a Claim for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract. Any claim by the Contractor for an equitable adjustment under this Section must be asserted within sixty days from the effective date of the partial Termination.

§ 14.5.4 The Contractor shall refund to the Owner any amounts paid by the Owner to the Contractor in excess of costs reimbursable under the Contract Documents.

§ 14.5.5 The Contractor shall, from the effective Date of Termination until the expiration of three years after final settlement under this Contract, preserve and make available to the Owner, at all reasonable times at the office of the Contractor, and without charge to the Owner, all books, records, documents, photographs and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the terminated Work. The Owner may have costs reimbursable under this Article 14 audited and certified by independent certified public accountants selected by the Owner, who shall have full access to all the books and records of the Contractor.

§ 14.5.6 The damages and relief from termination by the Owner specifically provided in Article 14 shall be the Contractor's sole entitlement in the event of termination.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of the Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract-Contract Documents. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the ~~Contract-Contract Documents~~. The responsibility to substantiate Claims shall rest with the party making the Claim. Claims must be initiated in writing and include the information and substantiation required by the Contract Documents. Neither a Request for Information, nor a Construction Change Directive, nor a Change Order, nor a reservation of rights, nor minutes of a meeting, nor a Daily Report, nor any log entry, nor an Owner's request for or the Contractor's response to a Change Order proposal or a proposal request, nor a notice of a potential or future Claim shall constitute a Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.2.1 In an effort to reduce the incidence and costs to all parties of extended disputes, all Claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, except claims which have been waived under the terms of the Contract Documents, shall be decided exclusively by the following alternative dispute resolution procedure unless the parties mutually agree in writing otherwise. To the extent that the Owner and Contractor agree to any partnering process to help resolve disputes, such processes shall be in addition to, and not in place of, the mandatory dispute resolution procedures in the Contract Documents.

§ 15.1.2.2 Except for Claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall submit a written notice of any Claim to the Owner and the Architect within seven days of the occurrence of the event giving rise to such Claim and shall include a clear description of the event leading to or causing the Claim. For all Claims, the Contractor shall submit a written Claim as provided herein within thirty days of submitting the notice. Claims shall include a clear description of the Claim and any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path and other information referenced in Section 8.3.2) and shall provide data fully supporting the Claim, including without limitation a complete explanation as to why the relief sought is not within the scope of the Contract Documents. The Contractor may delay submitting data by an additional fourteen days if it notifies the Owner in its Claim that substantial data must be assembled. Failure to properly submit the notice or Claim shall constitute waiver of the Claim. The Claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor (and Subcontractors of any tier) is entitled and may not contain reservations of rights without the Owner's written approval; any such unapproved reservations of rights shall be without effect. Any Claim of a Subcontractor of any tier may be brought only through, and after review by, the Contractor. For the purposes of calculating such time periods, an "event giving rise to a Claim" is not a Request for Information but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time. Further, an "event giving rise to a Claim" is not the date that the Contractor received a Claim from a Subcontractor but is the event which gave rise to the Subcontractor's Claim. The fact that the Owner and the Contractor may consider, discuss or negotiate an untimely or waived Claim shall in no way be deemed to constitute a waiver of any notice or other provisions of the Contract Documents.

§ 15.1.2.3 All notices and Claims shall be made in writing as required by the Contract and shall be addressed to the Owner's Designated Representative identified in the A101. Any notice of a Claim of the Contractor against the Owner and any Claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract. No act, omission, or knowledge, actual or constructive, of the Owner or the Architect shall in any way be deemed to be a waiver of the requirement for timely written notice and a timely written Claim unless the Owner and the Contractor sign an explicit, unequivocal written waiver approved by the Owner's Board of Directors. The fact that the Owner and the Contractor may consider, discuss, or negotiate a Claim that has or may have been defective or untimely under the Contract shall not constitute waiver of the provisions of the Contract Documents unless the Owner and Contractor sign an explicit, unequivocal waiver approved by the Owner's Board of Directors. The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices and/or timely submit Claims has a substantial impact upon and prejudices the Owner, including but not limited to the inability to fully investigate or verify the Claim, mitigate damages, choose alternative options, adjust the budget, delete or modify the impacted Work, and/or monitor time, cost and quantities. For these and other reasons, the parties stipulate that the Owner is prejudiced by the Contractor's failure to timely submit notices and/or Claims as required by the Contract Documents, and that the Owner shall not be required to establish any actual prejudice in order to enforce the notice and Claim provisions of the Contract Documents.

§ 15.1.2.4 At any time following the Owner's receipt of the written Claim, the Owner may require that an officer of the Contractor, a principal of the Architect, and the Owner's Superintendent or designee (all with authority to settle) meet, confer, and attempt to resolve the Claim. If the Claim is not resolved during such meeting, the Contractor may bring no litigation against the Owner unless the Claim is first subject to nonbinding mediation as described in this Article 15. This mediation requirement cannot be waived except by an explicit written waiver by both parties.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, including the dispute resolution process and except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and maintain the Contractor's Construction Schedule, and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the ~~Work~~ Work, and a written notice and a written Claim must be made in accordance with this Article 15, or it will be waived. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, a Claim shall be filed in accordance with this Article 15. The Contractor shall not be entitled to an increase in the Contract Sum or Contract Time arising out of an error or conflict in or among the Contract Documents where the Contractor failed adequately to review the Contract Documents or failed to report the error or conflict to the Owner and Architect in a timely manner consistent with the requirements of the Contract Documents. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be ~~given~~ given, and a written Claim must be made in accordance with Article 15, or it will be waived. The Contractor's Claim shall include an estimate of any cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary. Any adjustment in the Contract Time arising from a Change or a Claim shall be limited to the change in the actual critical path of the Project directly caused thereby. If the delay was not caused by the Owner, the Contractor, a Subcontractor of any tier, or the Architect, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time in accordance with the Contract Documents but not a change in the Contract Sum. If the delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled ~~construction~~ construction, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. The Contractor shall be entitled to a change in the Contract Time only (but not a change in the Contract Sum) if the Contractor can substantiate to the reasonable satisfaction of the Owner and Architect that there was materially greater than normal inclement weather considering the full term of the Contract Time and using a ten-year average of accumulated record mean values from climatological data compiled by the U.S. Department of Commerce National Oceanic and Atmospheric Administration for the locale closest to the Project, and that the alleged abnormal inclement weather actually extended the critical path of the Work. The change in Contract Time shall be provisional until Substantial Completion has been achieved, at which time the change in the Contract Time shall be the extent to which the total net accumulated number of calendar days lost due to inclement weather from commencement of the Work until Substantial Completion exceeds the total net accumulated number to be expected for the same period from the aforesaid data.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes without limitation:

- .1 damages incurred by the Owner for rental expenses, ~~for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and~~
- .2 damages incurred by the Contractor for principal and home office overhead and expenses including without limitation the compensation of personnel stationed there, for losses of financing, business and

reputation, and for loss of profit except anticipated profit arising directly from the Work for losses on other projects, for loss of profit, and for interest or financing costs.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of damages specified in the A101 Agreement or liquidated damages, when applicable, in accordance with the requirements of the Contract Documents, or to preclude an obligation of the Contractor to indemnify the Owner for direct, indirect or consequential damages alleged by a third party.

§ 15.2 INITIAL DECISION

~~[Not used.] § 15.2.1~~ Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 the Contract Documents shall be subject to mediation as a condition precedent to the initiation of binding dispute resolution. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor.

§ 15.3.2 The parties shall endeavor to resolve their Claims by ~~mediation which, unless the parties mutually agree otherwise, mediation.~~ A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to mutually agree upon a mediator. If the parties have not reached agreement on a mediator within thirty days of the request, either party may file the request with the American Arbitration Association or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service) in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. ~~then in effect.~~ A request for mediation shall be made in writing, ~~writing and~~ delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation ~~Contract.~~ Mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, ~~mediation, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.~~

§ 15.3.3 The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in the metropolitan location nearest the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 ARBITRATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided

that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.3.4 An officer of the Contractor and the Owner's Superintendent or designee must attend the mediation session with authority to settle the Claim, subject only to ratification by the Owner's Board of Directors. To the extent there are other parties in interest, such as the Architect or Subcontractors, their representatives, also with authority to settle the Claim, shall also attend the mediation session. Unless the Owner and the Contractor mutually agree in writing otherwise, all unresolved Claims shall be considered at a single mediation session that shall occur after Substantial Completion but prior to Final Acceptance by the Owner.

§ 15.5 Litigation. Any disputes that are not resolved through negotiations or mediation shall be resolved by litigation and not by arbitration. The Contractor may bring no litigation on Claims unless such Claims have been properly raised and considered in the procedures of this Article 15. The Contractor shall have the burden to demonstrate in any litigation that it has complied with all requirements of this Article 15. All unresolved Claims of the Contractor shall be waived and released unless the Contractor has complied with the time limits of the Contract Documents, and litigation is served and filed within the earlier of (a) 120 days after the Date of Substantial Completion approved in writing by the Owner or (b) ninety days after Final Acceptance. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor. The pendency of a mediation (the time period between the written mediation request and the date of mediation) shall toll these deadlines until the earlier of the mediator providing written notice to the parties of impasse or thirty days after the date of the mediation session. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Owner (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law). The Owner may join the Contractor as a party to any litigation or arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

Certification of Document's Authenticity
AIA® Document D401™ – 2003

I, Graehm Wallace, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 11:18:44 PT on 05/26/2021 under Order No. 1226258892 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201™ – 2007, General Conditions of the Contract for Construction, as published by the AIA in its software, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

(Signed) _____

(Title) _____

(Dated) _____

ADVERTISEMENT FOR BID

Bids will be accepted for the following project:

PROJECT NO.:	2021-XX
TITLE:	Huntington Middle School Modernization and Auxiliary Gym and Vestibule Addition
AGENCY:	Kelso School District No. 458
ESTIMATED CONSTRUCTION COST:	\$21,400,000 + WSST
ABBREVIATED PROJECT DESCRIPTION:	Modernization of the existing building. Building addition for new auxiliary gymnasium and main entry vestibule.
SUBMITTAL TIME/DATE/LOCATION:	Prior to 3:00 P.M., Thursday, July 15, 2021 at The Kelso School District Business Office 601 Crawford Street Kelso, WA 98626 Bids will be opened at approximately 3:01 p.m https://us02web.zoom.us/j/3609523566
BY:	Kelso School District No. 458
PRE-PROPOSAL WALK-THROUGH:	2:30 P.M, Wednesday, June 16th, 2021 and 2:30 P.M. Wednesday, June 23rd, 2021 Pre-Proposal Walk-Throughs <u>are not</u> mandatory Meeting at main entry to school.

Any questions asked on site, will be recorded and answered via published addendum.

The School district will make the plans available for contractors to view online without charge at

<http://www.kelso.wednet.edu/o/ksd/page/capital-projects-construction>

If contractors desire a paper copy of the documents they may download the files and have them printed at a printing company of their choice at their expense.

Please direct questions regarding this project to the office of the Consultant, Integrus Architecture, 117 South Main Street, Suite 100, Seattle, WA 98104, telephone (206) 628-3137.

No contractor may withdraw his bid after the hour and date set for the submittal thereof, or thereafter, before award of the Contract, unless award is delayed for a period exceeding thirty (30) days from the proposal submittal date.

The Owner reserves the right to accept or reject any or all proposals and to waive informalities.

Published 06/9/2021, 06/16/2021

INSTRUCTIONS TO BIDDERS

1.01 DEFINITIONS

- A. All definitions set forth in the General Conditions of the Contract for Construction or in other Contract Documents are applicable to the Bidding Documents.
- B. “**Addenda**” are written or graphic instruments issued by the Architect or the Kelso School District prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections. The contents of Addenda are issued in no particular order and therefore should be carefully and completely reviewed. Addenda relating to administrative matters, such as, for example, the date or time of meetings or Bid receipt, may be issued in writing by fax, mail or other delivery.
- C. An “**Alternate Bid**” (or “**Alternate**”) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted by the Kelso School District.
- D. “**Award**” means the formal decision by the Kelso School District notifying a Bidder with the lowest Responsive Bid of the Kelso School District’s acceptance of the Bid and intent to enter into a contract with the Bidder. A contract is only formed upon execution of the contract, and not simply by Award.
- E. The “**Award Requirements**” include the following statutory requirements as a condition precedent to Award. The lowest Responsive Bidder shall:
 - (1) have a certificate of registration in compliance with RCW 18.27;
 - (2) have a current state unified business identifier number;
 - (3) if applicable, have industrial insurance coverage for the Bidder’s employees working in Washington as required in Title 51 RCW;
 - (4) have an employment security department number as required in Title 50 RCW;
 - (5) have a state excise tax registration number as required in Title 82 RCW;
 - (6) not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations);
 - (7) if bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under RCW 49.04 for the one-year period immediately preceding the date of the Bid solicitation;
 - (8) have received training on the requirements related to public works and prevailing wages under chapters 39.04 and 39.12 RCW, or be exempt from such training requirements if the Bidder has completed three or more public works projects and has had a valid business license in Washington for three or more years; and

- (9) within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

Further, under revised RCW 39.04.350, if the Bidder has a history of receiving monetary penalties for not achieving the apprentice utilization requirements pursuant to RCW 39.04.320, or is habitual in utilizing the good faith effort exception process, the bidder must submit an apprenticeship utilization plan within ten business days immediately following the Kelso School District's notice to proceed.

- F. The “**Base Bid**” is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in Alternate Bids.
- G. A “**Bid**” is a complete and properly signed proposal to do the Work or designated portion thereof, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.
- H. A “**Bidder**” is a person or entity who submits a Bid for a prime contract with the Kelso School District for the Work described in the Contract Documents.
- I. The “**Bidding Documents**” include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid form, any other sample Bidding and contract forms, the Bid Bond, and the Contract Documents, including any Addenda issued prior to receipt of Bids.
- J. The “**Contract Documents**” for the Work consist of the Agreement Between Owner and Contractor, the General Conditions of the Contract (as well as any Supplemental, Special or other Conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- K. The “**Owner**” is the Kelso School District No. 458.
- L. To be considered “**Responsible**” or meet “**Responsibility**” requirements, a Bidder must meet the following supplemental criteria applicable to this Project to the satisfaction of the Architect and the Kelso School District:
- (1) The ability, capacity, and skill to perform the Contract;
 - (2) The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
 - (3) Whether the Bidder can perform the Contract within the time specified;
 - (4) The previous and existing compliance by the Bidder with laws relating to the Contract;
 - (5) The quality of performance of previous contracts, including demonstration of successful completion of three (3) similar projects of equal or greater size, scope and value in the last five (5) years;
 - (6) The designated Project Manager shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity;

- (7) The designated Superintendent shall have a minimum of five (5) years of successful supervision of projects of similar scope and complexity;
 - (8) Any other qualifications required by the Contract Documents or Bidding Documents; and
 - (9) Such other information as may be secured having a bearing on the decision to award the contract.
- M. A “**Sub-bidder**” is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.
- N. A “**Unit Price**” is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services as described in the Bidding Documents or in the Contract Documents. The Kelso School District reserves the right to reject at any time, without impairing the balance of the proposal, any or all such predetermined unit prices.

1.02 BIDDER’S REPRESENTATIONS

By making its Bid, each Bidder represents that:

- A. BIDDING DOCUMENTS. The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.
- B. POSSIBLE SELF-PERFORMED WORK REQUIREMENT. The Bidder will perform *with its own forces* at least that percentage (if any) of the Work required by the Bidding Documents or the Contract Documents.
- C. PRE-BID MEETING. The Bidder has attended any pre-bid meeting(s) required by the Bidding Documents.
- D. BASIS. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, without exception.
- E. EXAMINATION. The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents (including, without limitation, any liquidated damages and insurance provisions), and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed and has correlated its observations with the requirements of the Contract Documents and it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Bidder fully to acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.
- F. PROJECT MANUAL. The Bidder has checked its copies of the Project Manual with the Table of Contents bound therein to ensure the Project Manual is complete.

- G. SEPARATE WORK. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications for any other contracts to be awarded separately from, but in connection with, the Work being bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the contract being bid upon.
- H. LICENSE REQUIREMENTS. Bidders and their proposed Subcontractors shall be registered and shall hold such licenses as may be required by the laws of Washington, including RCW 18.27, for the performance of the Work specified in the Contract Documents.
- I. NO EXCEPTIONS. Bids must be based upon the materials, systems and equipment described and required by the Bidding Documents, and terms and conditions in the Contract Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

- 1. **Deposit.** Bidders may obtain electronic copies of the Bidding Documents from the issuing office and from any other locations designated in the Advertisement or Invitation to Bid. Bidders that desire paper copies may have the electronic copies reproduced at the Bidder's expense.
- 2. **Sub-bidders.** Bidding Documents will not be issued directly to Sub-bidders or others unless specifically offered in the Advertisement or Invitation to Bid.
- 3. **Complete sets.** Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for utilizing established plan holder identification processes to obtain updated bid information; neither the Kelso School District nor the Architect assumes any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents. Printed copies of plans take precedence over any on-line images.
- 4. **Conditions.** The Kelso School District and/or the Architect make copies of the Bidding Documents available on the above terms only for the purpose of obtaining Bids on the Work and do not confer a license or grant permission for any other use.
- 5. **Legible Documents.** To the extent any drawings, specifications, or other Bidding documents are not legible, it is the Bidder's responsibility to notify the Kelso School District and the Architect and to obtain legible documents from the plan center.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- 1. **Format.** The Contract Documents may be divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in or phases of the Project.
- 2. **Notify Owner and Architect.** Bidders and Sub-bidders shall promptly notify the Kelso School District and the Architect in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions. All Bidders and Sub-bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Kelso School District and the Architect any objections (in writing) no later than seven (7) calendar days prior to the Bid Date. The

submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.

3. **Written request.** Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven (7) calendar days prior to the date for receipt of Bids.
4. **Addenda.** Any interpretation, correction or change of the Bidding Documents will be made by written Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.
5. **Singular references.** Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
6. **Utilities and runs.** The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and any plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.
7. **Division of Contract Documents.** The Contract Documents may be divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in of phases of the Project.

C. SUBSTITUTIONS

1. **Standard.** The materials, products, procedures and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality that must be met by any proposed substitution.
2. **Substitution procedure.** No substitution will be considered prior to receipt of Bids unless the Architect receives a written request for approval on the Architect's Substitution Request form for the Project, with all data requested on the form completed, at least seven (7) days prior to the date for receipt of Bids. Each such request shall be submitted with a Request for Substitution form identical to or equivalent in content to the form found in the Project Manual, and shall include the name of the material or equipment proposed to be replaced and a complete description of the proposed substitute, including drawings, cuts, performance and test data, warranty information, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other Work that incorporation of the substitute would require shall be included. The proposer has the burden to prove the merit of the proposed substitute; by proposing the substitution, the Bidder represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified, that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that the Contract Time will not be increased, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work. The Architect's decision to approve or disapprove a proposed substitution shall be final. Written requests for approval shall constitute a guarantee by the Bidder that the articles or materials are in all respects, including warranty and installation, equal or superior to those specified, unless otherwise noted. To the extent the proposed substitution will require additional services by the Architect or its consultants after Bid award, the Bidder, if

successful, will be required to pay the Architect or its consultants for these services at their customary hourly rates.

3. **Addendum.** If the Architect approves a proposed substitution prior to receipt of Bids, the approval will be set forth in a written Addendum. Bidders shall not rely upon approvals made in any other manner. Substitution request forms returned by the Architect are a courtesy only, and Bidders/Sub-bidders shall rely solely on substitution approvals listed in an Addenda.
4. **Post-Bid substitutions.** After the Contract has been executed, the Kelso School District and the Architect may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only under the circumstances as specified therein.

D. ADDENDA

1. **Written.** All Addenda will be written. They will be mailed, emailed, faxed delivered, and/or posted electronically with notice to those the Architect knows to have registered with the Architect as a Bidder.
2. **Copies.** Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. **Verification and acknowledgment of receipt.** Prior to bidding, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. **Form.** Bids (including any required attachments) shall be submitted on forms identical to the form included with the Bidding Documents. Bids on different forms may be rejected. No oral, email, or telephonic responses or modifications will be considered to be Bids.
2. **Entries on the Bid form.** All blanks on the Bid form shall be filled in by typewriter or manually in ink.
3. **Words and figures.** Where so indicated by the makeup of the Bid form, sums shall be expressed in both words and figures; in case of discrepancy between the two and regardless of any statement to the contrary on the Bid form, *the amount written in figures shall govern and the words shall be used to determine any ambiguities in the figures*. Portions of the Bid form may require the addition of component bids to a total or the identification of component amounts within a total. In case of discrepancy between component amounts listed and their sum(s), the component amounts listed shall govern.
4. **Initial changes.** Any interlineation, alteration or erasure must be initialed by an authorized representative of the Bidder.
5. **Alternates and Unit Prices.** All requested Alternates and unit prices should be bid. The Kelso School District reserves the right, but is not obligated, to reject any Bid on which all requested Alternates or unit prices are not bid. If no change in the Base Bid is required for an Alternate, enter “No Change.” If there is no entry, it will be presumed that the Bidder has made no offer to accomplish this Alternate. If it is not otherwise clear from the Bid or nature

of the Alternate, it will be presumed that the amount listed for an Alternate is an add rather than a deduct.

6. **No conditions.** The Bidder shall make no conditions or stipulations on the Bid form nor qualify its Bid in any other manner.
7. **Identity of Bidder.** The Bidder shall include in the specified location on the Bid form the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation (including the state of incorporation), or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder, and provide other information requested.
8. **Bid amounts do not include sales tax.** The Bid shall include in the sum stated all taxes imposed by law, EXCEPT STATE AND LOCAL SALES TAX ON THE CONTRACT SUM.
9. **Bid breakdown.** The Bid form may contain, for the Kelso School District's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.

B. POTENTIAL LISTING OF SUBCONTRACTORS

1. **Procedure.** On certain projects of the Kelso School District, the Bid form includes a requirement that certain Subcontractors be listed, and the list must be submitted to the Kelso School District as described in the bidding documents. In these circumstances, the Bidder must name the Subcontractor with whom the Bidder, if awarded the Contract, will subcontract *directly* (i.e., not lower-tier Subcontractors) for performance of the work of:
 - (a) HVAC (heating, ventilation and air conditioning),
 - (b) plumbing as described in RCW 18.106,
 - (c) electrical work as described in RCW 19.28,
 - (d) structural steel installation,
 - (e) rebar installation, and
 - (f) any other categories of Work listed on the Subcontractor listing form(s).

TIMING: The listing of HVAC, plumbing, and electrical subcontractors shall occur within one hour of the published bid submittal time. The listing of structural steel installation and rebar installation subcontractors shall occur within forty-eight hours of the published bid submittal time. The listing of any other categories of Work listed on the Subcontractor listing form(s) shall occur as indicated on such forms or as otherwise described in the bidding documents.

SELF-PERFORMANCE: If the Bidder intends to self-perform any of these categories of Work, it must name itself for each such category of Work.

IF NO SUBCONTRACTORS: If there is no work to be performed by a HVAC, plumbing, electrical, structural steel installation, rebar installation, or other subcontractor category identified on the Bid form(s), the Bidder should insert "None" or "N/A" on the Bid form. If a

category is left blank, that shall indicate that the Bidder believes that there is no Work to be performed by that trade.

MULTIPLE ENTRIES: The Bidder shall not list more than one (1) entity for a particular category of Work identified, unless a Subcontractor varies with an Alternate Bid, in which case the Bidder shall identify the Subcontractor to be used for the Alternate and the affected portion of the Work and otherwise make its Bid clear as to which subcontractor shall be utilized depending upon the selection of alternates.

MULTIPLE SUBMITTAL TIMES. In the event the Bidding Documents call for a second submittal time for receipt of alternate bids, and no additional Subcontractors are listed with such alternate bids, the Kelso School District will consider that there is no change in the Subcontractors from those listed with regard to the base Bid.

2. **Failure to Submit.** In accordance with RCW 39.30.060, failure of a Bidder to submit the names of such proposed heating, ventilation and air conditioning, plumbing, electrical, structural steel installation, and rebar installation Subcontractors or to name itself to perform such Work or the naming of two or more Subcontractors to perform the same Work in the time periods described above shall render the Bidder's Bid nonresponsive and, therefore, void.
3. **Requirement to Subcontract.** The Bidder, if awarded the Contract, will subcontract with the listed Subcontractor for performance of the portion of the Work designated on the Form of Proposal, subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Subcontractor in furtherance of bid shopping or bid peddling.
4. **Replacement.** If a listed Subcontractor is unable to comply with any bondability, qualification, or other requirements of the Contract or Bidding Documents (including without limitation a finding of Subcontractor non-Responsibility), the Kelso School District may require the Bidder to replace the Subcontractor with a Subcontractor acceptable to the Kelso School District at no change in the Contract Sum or Contract Time.
5. **Subcontractor Standards.** Subcontractors shall meet contractual and technical qualifications standards, and provide specialized certification, licensing, and/or payment and performance bonding where specified.

C. **BID SECURITY**

1. **Purpose and procedure.** Each Bid shall be accompanied by a bid security payable to the Kelso School District in the form required in the Bidding Documents and equal to five percent (5%) of the Base Bid. The bid security constitutes a pledge that the Bidder will enter into the Contract with the Kelso School District in the form provided, in a timely manner, and on the terms stated in its Bid and will furnish in a timely manner the payment and performance bonds, certificates of insurance, Contractor's Construction Schedule, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the bid security shall be forfeited to the Kelso School District as liquidated damages, not as a penalty. By submitting its Bid and bid security, the Bidder agrees that any forfeiture is a reasonable prediction at the time of Bid submittal of future damages to the Kelso School District.
2. **Form.** The bid security shall be in the form of a certified or bank cashier's check payable to the Kelso School District or a bid bond executed by a bonding company acceptable to the Kelso School District and licensed in the State of Washington on the form included with the

Bidding Documents (if any) or on an acceptable and equivalent form. The Attorney-in-Fact who executes the bond on behalf of the surety shall be licensed to do business in the State of Washington and shall affix to the bond a certified and current copy of his or her Power of Attorney.

3. **Retaining Bid Security.** The Kelso School District will have the right to retain the Bid Security of Bidders to whom an award is being considered until the earliest of either (a) the Contract has been executed, and payment and performance bonds have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.
4. **Return of Bid Security.** Within forty-five (45) days after the Bid Date, the Kelso School District will release or return Bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all unforfeited Bid securities will be returned.

D. SUBMISSION OF BIDS

1. **Procedure.** The Bid, the Bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party specified in the Advertisement or Invitation to Bidders and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "*SEALED BID ENCLOSED*" on the face thereof.
2. **Deposit.** Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids may be opened, retained unopened, or returned (open or unopened), all at the discretion of the Kelso School District.
3. **Responsibility.** The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.
4. **Form.** Oral, fax, telephonic, email, electronic, or telegraphic Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. **After receipt time.** A Bid may not be modified, withdrawn or canceled by the Bidder during a forty-five (45) day period following the time and date designated for the receipt of Bids, and each Bidder so agrees by virtue of submitting its Bid.
2. **Before receipt time.** Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by telegram or fax; if by telegram or fax, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids. The notice shall be worded so as not to reveal the amount of the original Bid. Email notice will not be considered. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Kelso School District in time to be withdrawn before the Bid opening.

3. **Resubmittal.** Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
4. **Bid security with resubmission.** Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

F. NOTICE

1. Notice or a request from a Bidder under these Instructions to Bidders must be in writing over the signature of the Bidder and delivered in person or by mail, express delivery, telegram or fax. If the notice is by telegram or fax, written confirmation over the signature of the Bidder must be mailed and postmarked on or before the date and time set for the notice.

1.05 CONSIDERATION OF BIDS

- A. **OPENING OF BIDS:** Unless stated otherwise in the Advertisement or Invitation to Bid or any Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and Alternate Bids, if any, will be made available to Bidders and other interested parties.
- B. **REJECTION OF BIDS:** The Kelso School District shall have the right but not the obligation to reject any or all Bids for any reason or for no reason, to reject a Bid not accompanied by required Bid security or by other material or data required by the Bidding Documents, or to reject a Bid which is in any way incomplete or irregular.

C. ACCEPTANCE OF BID (AWARD)

1. **Owner.** The Kelso School District intends (but is not bound) to award a Contract to the lowest Responsible and Responsive Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Kelso School District has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.
2. **Alternates.** The Kelso School District shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Contract Documents or Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates (if any) accepted. The Kelso School District retains the right to accept Alternate Bid items at the price bid within forty-five (45) days after the Agreement is executed.
3. **Requirements for Award.** Before the Award, the lowest Responsive Bidder shall meet the Award Requirements.

D. BID PROTEST PROCEDURES

1. **Procedure.** A Bidder protesting for any reason the Bidding Documents; a bidding procedure; the Kelso School District's objection to the Bidder or a person or entity proposed by the Bidder, including but not limited to a finding of non-Responsibility; the rejection of a Bid; the award of the Contract; or any other aspect arising from or relating in any way to the bidding and award or lack thereof, shall cause a written protest to be filed with the Kelso School District within two (2) business days of the event giving rise to the protest and, in any event, no later than two (2) business days after the date upon which Bids are opened. (Intermediate Saturdays, Sundays, and legal holidays are not counted.) The written protest shall include the name of the protesting Bidder, a detailed description of the specific factual and legal grounds

for the protest, copies of all supporting documents, and the specific relief requested. The written protest shall be delivered to:

Mary Beth Tack, Superintendent
Kelso School District No. 458
601 Crawford Street
Kelso, Washington 98626
marybeth.tack@kelso.org

2. **Consideration.** Upon receipt of the written protest, the Kelso School District will consider the protest. The Kelso School District may, within three (3) business days of the Kelso School District's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Kelso School District, the Superintendent of the Kelso School District or his or her designee will review the issues and promptly furnish a final and binding written decision to the protesting Bidder and any other affected Bidder(s) within six (6) business days of the Kelso School District's receipt of the protest. (If more than one (1) protest is filed, the Kelso School District's decision will be provided within six (6) business days of the Kelso School District's receipt of the last protest.) If no reply is received from the Kelso School District during the six (6) business-day period, the protest shall be deemed rejected.
3. **Waiver.** Failure to comply with these protest procedures will render a protest waived.
4. **Condition precedent.** Timely and proper compliance with and exhaustion of these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. INFORMATION FROM APPARENT LOW BIDDER

1. **Submittal.** Within forty-eight (48) hours of the Architect's request, the apparent low Bidder and any other Bidders so requested shall submit the following to the Architect and the Kelso School District:
 - (a) additional information regarding the use of their own forces and the use of subcontractors and suppliers;
 - (b) a properly executed Contractor's Qualification Statement on the form provided (unless otherwise required to be submitted at the time of the Bid);
 - (c) a letter or form from the Bidder's insurance company stating that the insurance required by the Contract Documents will become effective upon execution of the Contract;
 - (d) a letter or form from the Bidder's surety stating that the bond(s) required by the Contract Documents will become effective upon execution of the Contract;
 - (e) if requested by the Kelso School District, a detailed breakdown of the Bid in a form acceptable to the Kelso School District;
 - (f) the names of the persons or entities (including a designation of the Work to be performed with the Contractor's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work;

(g) the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work;

(h) a State Board of Education Form D-9, if requested; and

(i) a signed statement in accordance with RCW 9A.72.085 verifying under penalty of perjury that the bidder is in compliance with the responsible bidder criteria of RCW 39.04.350(1)(g).

Failure to provide any of the above information in a timely manner may constitute an event of breach permitting forfeiture of the Bid security.

2. **Responsibility.** The Bidder will be required to establish to the satisfaction of the Architect and the Kelso School District the reliability and Responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents as well as qualifications set forth in the Sections of the Project Manual pertaining to such proposed Subcontractor's respective trades. The Responsibility of the Bidder may be judged in part by the Responsibility of these proposed entities. The following will be considered:

- The ability, capacity, and skill to perform the contract;
- The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
- Whether the Bidder can perform the contract within the time specified;
- The quality of performance of previous contracts;
- The previous and existing compliance by the Bidder with laws relating to the contract; and
- Such other information as may be secured having a bearing on the decision to award the contract.

CONSIDERATION. In considering a Bidder's Responsibility, a Bidder shall be deemed to be unqualified to perform the Contract if, after review and verification of the representations included upon the Contractor's Qualification Statement submitted by the Bidder, conditions such as, but not limited to, the following appear:

(a) The Bidder does not have sufficient prior experience (or an acceptable substitute thereof, as described below) with projects of a similar nature in technical, managerial, and financial requirements to that in the present Contract being bid. In addition to such established contractors, a newly established contractor may be considered qualified if it has shown on the Contractor's Qualification Statement that it is staffed with sufficient technical, managerial, and financial personnel with prior experience in the nature of construction for which the Bids are invited.

(b) The Bidder does not have sufficient capability to undertake the obligations of the Contract. A determination will be made when the Kelso School District's review of the probable cash flow needs of the Bidder for this Project (including payroll, cost of material and supplies, equipment rental costs, and any other direct or incidental costs of the Contract), concludes that the Bidder does not have sufficient financial resources to enable it to satisfy its financial obligations under the Contract.

(c) The Bidder has submitted unrealistic unit prices as determined by other Bidders' unit prices for this Project.

(d) The Bidder does not have sufficient staff, equipment, or plant available to perform the Contract. The Kelso School District's determination in this matter will be based upon that represented by Bidder in the Contractor's Qualification Statement.

- (e) The Bidder has a history of unsatisfactory performance of contracts of this or similar nature, regardless of whether such contracts existed between the Kelso School District and the Bidder, or other parties.
- A determination of this nature will be made if the Kelso School District, after review of the Bidder previous work experience, determines that the Bidder's unsatisfactory performance has resulted predominantly from the Bidder's failure rather than a failure to perform by another party. The Kelso School District will give the Contractor an opportunity to explain such nonperformance's before any final determination is reached.
 - A determination of failure to perform will be made if the Kelso School District is satisfied after review of the Bidder's prior experience, that the Bidder has failed to satisfy its obligations under past contracts and the Kelso School District cannot safely assume satisfactory performance of the Contract by the Bidder.
 - In reaching its determination, the Kelso School District may consider statements of other parties to the prior unperformed contracts, as well as the representations of the Bidder on its Contractor's Qualification Statement.
3. **Subcontractors.** The Responsibility of the Bidder may be judged in part by the Responsibility of its Subcontractors. Bidders must verify Responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that hires other Subcontractors must verify Responsibility criteria for each of its next lower-tier Subcontractors. Verification shall include that each Subcontractor, at the time of subcontract execution, is Responsible and possesses an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87, and can obtain any payment and performance bonds required by the Bidding or Contract Documents.
4. **Request to Modify Criteria.** No later than ten (10) days prior to the Bid Date, a potential Bidder may request in writing that the Kelso School District modify the Responsibility criteria listed in clause (2) above or elsewhere in the Contract Documents or the Bidding Documents. The Kelso School District will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the criteria, the Kelso School District will issue an Addendum identifying the new criteria.
5. **Objection.** Prior to the Award of the Contract, the Architect will notify the Bidder in writing if either the Kelso School District or the Architect, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder, and the Kelso School District will provide the reasons for the determination. The Bidder may appeal the determination within two (2) business days of its receipt of the objection by presenting additional information to the Kelso School District, and the Kelso School District will consider the additional information before issuing its final determination. The Bidder may, after the Kelso School District's objection or determination, and at Bidder's option, (1) withdraw the Bid, (2) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by the substitution, or (3) appeal by filing a protest in accordance with paragraph 1.05.D. In the event of withdrawal, Bid security will not be forfeited.
6. **Change.** Persons and entities proposed by the Bidder and to whom the Kelso School District or the Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Kelso School District and the Architect.

7. **Right to Terminate.** The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. Should it appear that the Bidder has made a material misrepresentation on its Contractor's Qualification Statement, the Kelso School District shall have the right to terminate the Contract for cause for the Contractor's breach, and the Kelso School District may then pursue such remedies as exist elsewhere under this Contract, or as otherwise are provided at law or equity.

B. **INFORMATION FROM OTHER BIDDERS:** All other Bidders designated by the Architect as under consideration for award of a Contract shall also provide a properly executed Contractor's Qualification Statement, if so requested by the Kelso School District.

C. **BIDDING MISTAKES:** The Kelso School District will not be obligated to consider notice of claimed bidding mistakes received more than three (3) business days after the Bid opening. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from bidding on the Project if a subsequent call for Bids is made for the Project.

1.07 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

A. **BOND REQUIREMENTS:** Within forty-eight (48) hours after the issuance of the Kelso School District's notice of intent to award the Contract, and prior to the date of execution of the Contract, the Bidder shall furnish evidence satisfactory to the Kelso School District of its ability to obtain statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form prescribed in the Contract Documents and in the full amount of the Contract Sum plus sales tax. The cost of such bond shall be included in the Base Bid.

B. **TIME OF DELIVERY AND FORM OF BONDS.** The Bidder shall deliver the bonds and other documents required by the Contract Documents (including but not limited to certificates of insurance) to the Kelso School District pursuant to the Contract Documents and in no event any later than three (3) days after the date of execution of the Contract and prior to commencing operations at the site. The bonds shall be written in the form approved by the Kelso School District for public work, as required by RCW 39.08. The bonds shall be written by a surety firm licensed to do business in the State of Washington, with an A.M. Best rating of at least A-/VII. The Bidder shall require the Attorney-in-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his/her Power of Attorney.

1.08 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

A. **FORM TO BE USED:** The Agreement for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental or Special Conditions, and the other Contract Documents included with the Project Manual. In the event no form is enclosed, an AIA Document A101-2017, "Standard Form of Agreement Between Owner and Contractor, where the basis of payment is a Stipulated Sum," along with the General Conditions (AIA Document A201-2007), as both are revised, modified and supplemented by the Kelso School District, will be used. All references in these Instructions to Bidders to the A101 or the A201 refer to the documents as revised by the Kelso School District.

B. **CONFLICTS:** In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.

1.09 CONTRACT DOCUMENTS

This paragraph contains descriptions of some but not all of the provisions of the Contract Documents.

- A. RETAINAGE: The Contract Documents specify the statutory retainage requirements of RCW 60.28 for this Project.
- B. CONTRACT TIME: The Contract Documents specify the Contract Time. Timely completion of this Project is essential to the Kelso School District.
- C. PREVAILING WAGES: The Contract Documents contain requirements regarding the payment of prevailing wages pursuant to RCW 39.12.
- D. WRITTEN CLAIMS AND NOTICE: The Contract Documents contain a number of provisions that require the Contractor to provide notice of Claims and to make and support Claims, in writing, within a specified time in order to maintain the Claim. The Kelso School District is under no obligation to consider Claims that fail, in any respect, to meet these requirements.
- E. CHANGES IN CONTRACT SUM: The Contract Documents contain provisions specifying requirements for and pricing of changes in the Contract Sum.
- F. DISPUTE RESOLUTION: The Contract Documents contain provisions replacing the arbitration provisions of the form General Conditions with an alternative dispute resolution procedure which, among other things, requires non-binding mediation of all disputes.
- G. CONTRACTOR REGISTRATION: Pursuant to RCW 39.06, the Bidder shall be registered or licensed as required by the laws of the State of Washington, including but not limited to, RCW 18.27.
- H. TAXES. The Contractor shall include in its Bid and pay for all applicable taxes except Washington State Sales Tax and Local Sales Tax on the Contract Sum, which shall be excluded in the preparation of its Bid. Such State and Local Sales Taxes shall be added to the Contract Sum, paid by the Kelso School District to the Contractor, and then paid by the Contractor over the course of the Project. Refer to general, supplementary or other conditions regarding further information.
- I. OTHER PROVISIONS: The above paragraphs contain descriptions of some but not all of the provisions of the Contract Documents. Bidders should review in detail the Contract Documents themselves and not rely upon the above paragraphs in this article as complete or inclusive.

1.10 POSSIBLE TRENCH EXCAVATION SAFETY PROVISIONS

- A. To ensure that the Bidder agrees to comply with relevant trenching safety requirements of RCW 39.04.180 and RCW 49.17, the Base Bid must include the cost of any required trench safety provisions. The Bidder shall enter in the blank provided on the Bid form the dollar amount the Bidder has included in its Base Bid for any trench safety provisions for trenching that will exceed a depth of four feet. If trench excavation safety provisions do not pertain to the Project, the Bidder may enter "N.A." or "Not Applicable" in the blank on the Bid form.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Documents Include:
 - 1. Environmental & Hazardous Material Report
 - 2. Geotechnical Engineer Report and Addendum No 1.
 - 3. Existing Drawings.
- B. Available Project information has been furnished by Owner to Architect/Engineer for use in designing this Project.
 - 1. Each bidder shall be fully familiar with these documents which have been prepared for Owner by his separate consultant.
 - 2. Such data is offered solely for reference and shall not be considered part of Contract Documents. Data contained in Documents prepared by Owner's separate consultants is believed to be reliable; however, Owner and Architect do not guarantee their accuracy or completeness.
 - 3. In preparing his bid, each bidder shall consider and evaluate data contained in above documents as well as Drawings and Project Manual prepared by Architect.

1.2 ENVIRONMENTAL & HAZARDOUS MATERIAL REPORT

- A. A copy of a Hazardous Material Report titled Environmental & Hazardous Material Report prepared for Construction Services Group dated March 29, 2021 and prepared by Now Environmental Services is included at the end of the section.
- B. The data is for information only.

1.3 GEOTECHNICAL ENGINEERING REPORT AND ADDENDUM NO. 1

- A. A copy of a geotechnical report, titled Geotechnical Engineering Report, prepared for Kelso School District, dated July 7, 2020, and prepared by PBS is included at the end of the section.
- B. A copy of a Geotechnical Engineering Report Addendum No. 1 addressed to Mr. Scott Westlund, dated April 2, 2021, and prepared by PBS is included at the end of the section.
- C. The data is for information only and not intended as representations or warranties of continuity of conditions between borings.
- D. The Subsurface Investigation was prepared for design purposes only and may not be sufficient to prepare an accurate bid. Bidders desiring to conduct additional subsurface investigations prior to bidding should contact the Owner for arrangements to enter project site. Bidders shall make any investigation of existing subsurface conditions as deemed necessary at no expense to Owner.

1.4 EXISTING AS BUILT DRAWINGS

- A. Documents from existing school drawings are available for reference only.

1. Existing drawings are posted electronically with bid package.
2. Existing drawings will be made available at the Kelso School District Office. Contact District Office to make arrangements.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

Environmental & Hazardous Material Report
Huntington Middle School
500 Red Path Street
Kelso, WA

Prepared for: Construction Services Group
Andrew Twyman Project Manager
2500 NE 65th Avenue
Vancouver, WA 98861

Project Location: Kelso School District
601 Crawford Street
Kelso, WA 98606

Specific Bldg. Huntington Middle School
500 Redpath Street
Kelso, WA 98606

Work to be performed: Environmental & Hazardous Material Survey

Now Project Number: N20-0073

Report Deliverable Date: March 29, 2021

Prepared By: Dennis Rauschenberg

Company Name: NOW Environmental Services, Inc.

Inspector Name: Dennis Rauschenberg
Certificate Number: BI/R-NES-01082021-09
Expiration Date: January 24, 2022

Background:
(Executive
Summary):

The Huntington Middle School was built in 1952. The building has three stories the ground floor consists of the lunch room, kitchen, locker rooms, storage, and the boiler room. The first and second floors consist the gymnasium, classrooms, offices, library, etc. The school is constructed of concrete with flat built-up roofing system. There are utilidors throughout the first floor that contain domestic lines and the heating system. Two other structures are included in this survey both buildings are standalone structures one is the field house and the other is the wood shop (Identified as Building #2 and #3)

No suspect ACM structural steel fireproofing was identified in any area inspected.

Asbestos Containing Materials

There is asbestos containing material identified within the scope of work during this inspection.

There is a large amount of Thermal System Insulation (TSI) throughout the school, due to the nondestructive nature of the survey quantifying the linear footage of the domestic and steam lines is not possible. This report does identify TSI that is visible throughout the structure. Within the Utilidors (Tunnels) and above the hard lid ceiling on the first floor there are 4-inch, 6 inch, and 8-inch insulation on Steam and domestic lines with an estimate of approximately an additional 3000 linear feet of TSI.

Floor Tile exists throughout the Main Building plus the Feld House and the Wood Shop, all vinyl is adhered to concrete, some tile exists under carpet please refer to the drawings for the locations and the total amount for each. (The Field House and the Shop are included in this survey but are not included in the abatement phase) Please refer to the CAD drawings and the attached drawings for the approximate amount of asbestos to be removed.

Lead

The presence of lead-containing coatings raises concerns about worker and environmental protection. Workers disturbing lead-containing coatings are covered under the lead standard (WAC 296-155-176) until shown they are not being exposed above the action limit of $30\mu\text{g}/\text{m}^3$. The requirements for this standard include, but are not limited to, air monitoring, respiratory protection, medical surveillance, lead work plan, warning signs and wash stations. Lead testing was performed by Mike McKay a certified Lead Risk Assessor certification #168592 expires July 18, 2021. All testing was performed on site using a Nikon XRF Lead Gun. **(Please see attached lead results)**. Lead testing was performed throughout the facilities.

- The Hazardous Materials Abatement Contractor or Demolition Contractor is responsible to conduct any and all monitoring for exposure to lead as defined in WAC 296-155-17609.
- The Washington State Department of Ecology requires that waste from demolition activities that exhibit toxic characteristics be analyzed using the Toxic Characteristic Leachate Procedures (TCLP) (40 CFR 261.24). Due to the destructive nature of collecting a TCLP sample in an occupied building this testing will be performed prior to demolition if required

Polychlorinated Biphenyl (PCBs)

A visual inspection was utilized to identify PCB containing ballasts in the building, using a random inspection of installed lighting system ballasts (approx. 10% in areas to be impacted).

- The Hazardous Materials Abatement Contractor shall assume all florescent ballasts contain PCBs unless otherwise labeled.
- The Hazardous Materials Abatement Contractor shall properly remove, containerize, label, and dispose of all PCB containing ballasts in lighting fixtures impacted by this project.

Lamps

A visual inspection was utilized to identify fluorescent light tubes during the course of this survey as defined in 40 CFR PART 273—STANDARDS FOR UNIVERSAL WASTE MANAGEMENT

- All fluorescent light tubes, including compact fluorescent light bulbs (CFLs), shall be properly recycled and/or disposed of according to Federal, State and local regulations.
- All universal waste lamps including, but not limited to, fluorescent, high intensity discharge (including mercury vapor, metal halide and high-pressure sodium) and neon lights shall be properly recycled and/or disposed of according to Federal (40 CFR 273), State and local regulations.

Mercury

A visual inspection was utilized to identify mercury containing thermostats and light switches as a part of this survey as defined in 40 CFR PART 273—STANDARDS FOR UNIVERSAL

WASTE MANAGEMENT. Though it is possible that mercury may be found in lamps, light switches, thermostats and other components throughout this structure.

- The Hazardous Materials Abatement Contractor shall properly collect and dispose of any mercury containing items (40 CFR 273) that may be impacted as a result of this scope of work.

This project will disturb all building materials.

Survey Process:
(Limitations of
Survey):

Building systems inspected and suspect materials sampled are representative of materials that may be disturbed during this project. (See Table I – Summary of Suspect Materials) Any material identified during the course of this project that was not identified in this survey must be inspected and sampled by an EPA Accredited Building Inspector prior to disturbance.

A TCLP sample was not collected to ascertain the amount of leachable lead in the demolition waste stream. Due to the destructive nature to acquire a waste stream sample this will be completed prior to demolition. (See Table II – Summary of TCLP Results)

The PCB containing light ballast inspection procedure utilizes a random visual inspection of installed lighting system ballasts (approx. 10% in areas to be impacted).

The mercury containing component inspection procedure utilizes a visual inspection of suspect electrical and thermostatic devices for the presence of mercury vials.

Other hazardous materials were not included in the scope of work during the course of this survey. Other risks that were not evaluated with this survey; Risks such as 1) toxic and hazardous substances in (or in contact with or associated with) soil or ground water; 2) risks associated with structural, electrical, or mechanical working of the building; 3) risks associated with radon gas, slope stability, building settlement, moisture, or site drainage and flooding have not been evaluated during this survey.

Findings:

There is multiple asbestos sampled within the scope of work for this project that were found to contain asbestos. Please see Table I – Summary of Suspect Materials, for a list of sampled materials and laboratory results.

A representative building waste stream sample was not taken for the existence of leachable lead. Please see Table II – Summary of TCLP Results for laboratory results. A material "fails" the TCLP when there is greater than 5.0 parts per million (ppm) of lead in the leachate.

PCB containing light ballasts **were not** identified in the survey. Please see Table III - Summary of PCB Containing Light Ballasts in Fluorescent Light Fixtures.

No mercury containing thermostats were identified. **No** mercury light switches were visually observed as a result of this investigation.

Florescent light fixtures were identified. A total of **2,000 tubes** throughout the facilities.

Asbestos Containing Building Materials

All Asbestos flooring material is either exposed or under carpet please refer to the attached drawings for the locations and the total amount of material to be abated all flooring is adhered to concrete

VT1



Description: Green 9x9 Vinyl Tile w/Dark Mastic.

Material Location: Kitchen See Attached Drawings

Asbestos Content: 2% Chrysotile in the Tile and 3% Chrysotile in the Mastic. (Non-Friable) on Concrete

Estimated Quantity:

See Attached Drawing

Sample Number HMS-01

VT2



Description: Multi-Colored 12x12 Vinyl Tile w/Dark mastic

Material Location: Lunch Room and adjoining Hallways

Asbestos Content: Non- Detect in the Tile and <1% Chrysotile in the Mastic (Non-Friable on Concrete)

Estimated Quantity:

See Attached Drawings

Sample Number: HMS-02

VS1



Description: Broken Rock Vinyl Sheetting

Material Location: Kitchen

Asbestos Content: 25% Chrysotile in the Vinyl Sheetting with Non-Separable Mastic (on Concrete Friable)

Estimated Quantity: 144 Square Feet

See Attached Drawings

Sample Number: HMS-03

TSI1



Description: 2 Inch Domestic Line
Insulation

Material Location: East Hall Entry
to Boys Locker Room Ground
Floor, Room 104 Storage First
Floor, Girls Locker Room Ground
Floor Equipment Storage

Asbestos Content: 20% Chrysotile
10%/ 15% Amosite (Friable)

Estimated Quantity: 220 LF Visible

Sample Number: HMS-08 09 10

TSI2



Description: 4- and 6-Inch Steam
Pipe Insulation

Material Location: Room 109, 111,
112 First Floor

Asbestos Content: 6% to 10%
Chrysotile and 4% to 10% Amosite
(Friable)

Estimated Quantity: 40 Linear Feet
Visible

Sample Number: HMS-23 28 30

VT5



Description: Gray 9x9 Vinyl Tile
w/Dark mastic

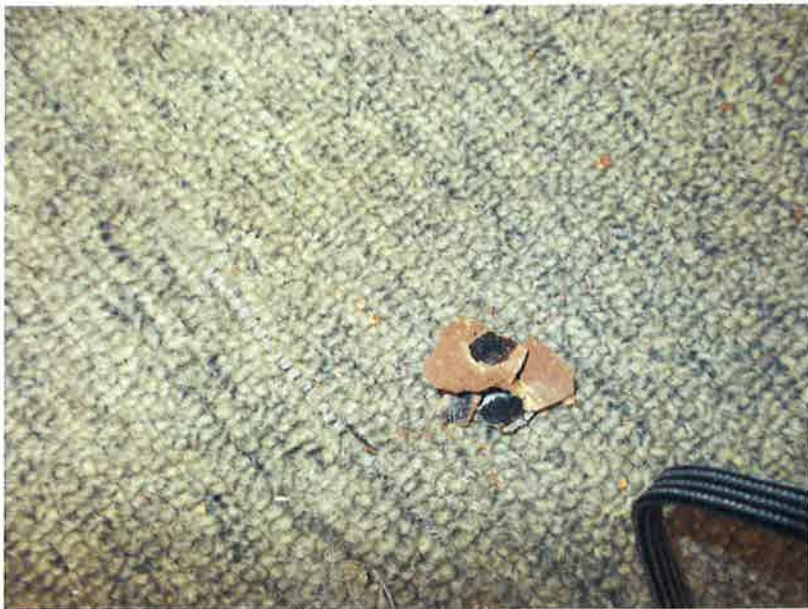
Material Location: Room 110

Asbestos Content: 2% Chrysotile
in the Tile and 2% Chrysotile in the
Mastic (Non-Friable on Concrete)

Estimated Quantity: See Attached
Drawings

Sample Number: HMS-25

VT6



Description: Lite Brown 9x9 Vinyl
Tile w/Dark Mastic

Material Location: Room 107

Asbestos Content: 2% Chrysotile
in the Tile and 2% in the Mastic
(Non-Friable on Concrete)

Estimated Quantity: See Attached
Drawings

Sample Number: HMS-27

VT7



Description: Red 9x9 Vinyl Tile
w/Dark Mastic

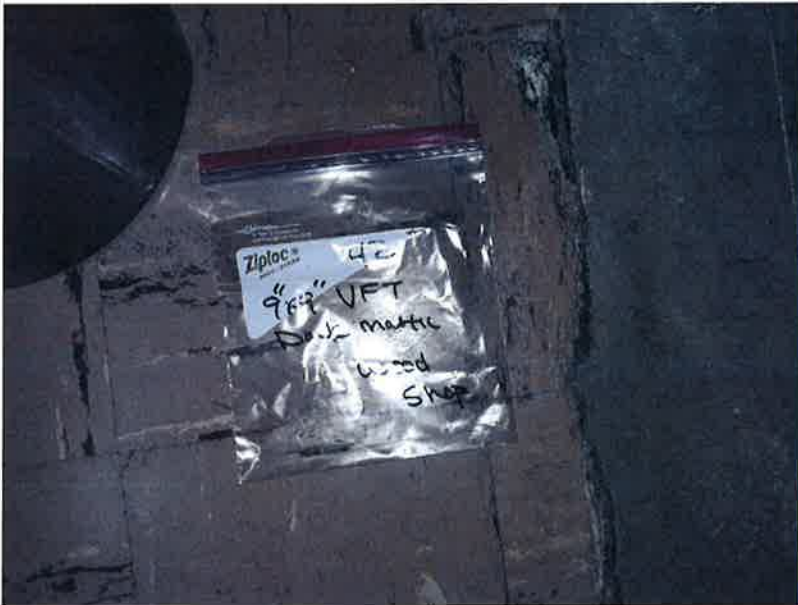
Material Location: Room 112

Asbestos Content: 2% Chrysotile
in the Tile and <1% Chrysotile in
the Mastic (Non-Friable on
Concrete)

Estimated Quantity: See Attached
Drawings

Sample Number: HMS-31

VT8



Description: 9x9 Vinyl Tile w/Dark
Slashes and Dark Mastic

Material Location: Wood Shop

Asbestos Content: 2% Chrysotile
in the Tile and 3% Chrysotile in the
Mastic (Non-Friable on Concrete)

Estimated Quantity: 1,800 Square
Feet

See Attached Drawings

Sample Number: HMS-42

Not included in Survey

VT9



Description: 12x12 Orange Vinyl Tile with Tan and Dark Mastic

Material Location: Field House Hallway

Asbestos Content: Non-Detect in the Tile and 3% in Chrysotile in the Mastic (Non-Friable on Concrete)

Estimated Quantity: 600 Square feet

See Attached Drawings

Sample Number: HMS-52

Not included in Survey

VT11



Description: Beige Vinyl Tile Unknown Cut with Tan and Dark Mastic Remnants

Material Location: Room 105

Asbestos Content: Non-Detect in The Tile and Tan mastic <1% Chrysotile in the Dark mastic Remnants. (Non-Friable on Concrete)

Estimated Quantity: See Attached Drawings

Sample Number: HMS-61

TSI4

Description: 1 Inch Asbestos pipe Insulation

Material Location: Closet/Fan Room, Office Break Room

Asbestos Content: 40% Chrysotile (Friable)

Estimated Quantity: 4 Linear feet Visible

Sample Number: HMS-65

TSI5

Description: 8 Inch Asbestos pipe Insulation

Material Location: Attic Above the Gymnasium and the Music Room, Fan Room

Asbestos Content: 60% to 70% Chrysotile (Friable)

Estimated Quantity: 120 Linear in the Attic above the Gym, 100 Linear Feet on the Mezzanine Stage Storage, 300 Linear Feet above the Music Room and 12 Feet in the Fan Room Bottom Floor behind the Kitchen.

Sample Number: HMS-68 69 70

TSI6

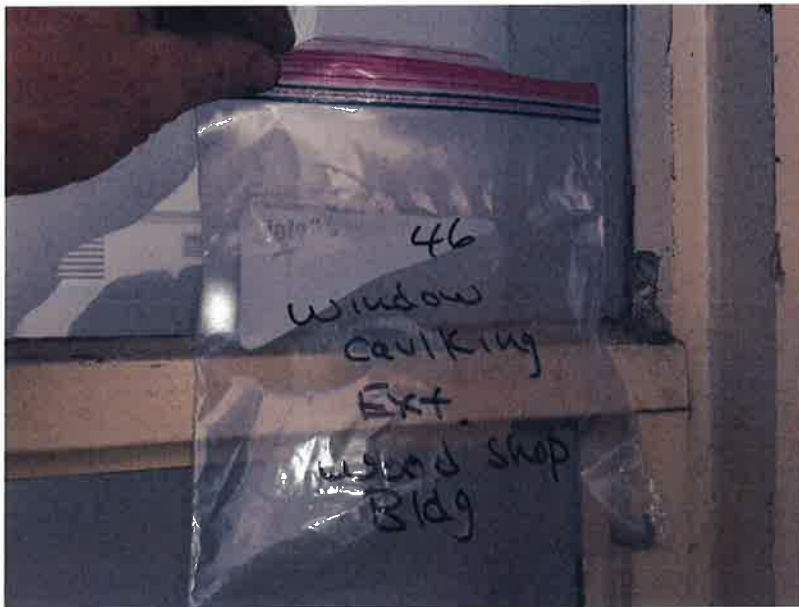
Description: 6-inch Asbestos Pipe Insulation

Material Location: Throughout the Utilidors/Tunnels

Asbestos Content: 60% to 70% Chrysotile (Friable)

Estimated Quantity: TBD

Sample Number: HMS-76 77 78

MISC6

Description: Window Putty

Material Location: Wood Shop Exterior.

Asbestos Content: 4% Chrysotile (Can become friable on removal)

Estimated Quantity: 1 Count

Sample Number: HMS-26

Not included in the Survey

RM4



Description: Roofing Core Sample

**Material Location: Wood Shop
Roof**

**Asbestos Content: 80% in the Felt-
on Wood (Friable)**

**Estimated Quantity: 2,000 Square
feet**

Sample Number: HMS-41

Not included in the Survey

NON-Asbestos Containing Building Materials

VS1



Description: Vinyl Sheetting

Material Location: Rest Rooms
Cafeteria Ground Floor

Asbestos Content: Non-Detected

Estimated Quantity: N/A

Sample Number: HMS-04

MISC1



Description: Brick and Mortar

Material Location: Kitchen/Ground
Floor

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-06

CT1



**Description: 1x1 Ceiling Tile
w/Brown Glue Dots**

**Material Location: Throughout the
School**

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-07, 13

VT3



**Description: 12x12 Vinyl Tile w/Tan
mastic**

**Material Location: Room 101 /First
Floor**

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-11

CT2



Description: 2x4 Ceiling Tile

Material Location: Throughout School

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-12

SU1



Description: Gray Sink Undercoating

Material Location: Room 101/First Floor

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-14

MISC2



Description: Chalk Boards

Material Location: Throughout

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-15

MA1



Description: Tan Carpet mastic

Material Location: Throughout the Structure

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-18

VS4



**Description: Green Vinyl Sheetting
with w/Burlap Backing**

**Material Location: Music
Room/First Floor**

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-19

VS5



**Description: Blue Vinyl Sheetting
w/Burlap Backing**

**Material Location: Music
Room/First Floor**

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-20

PL1



Description: Skim Coat and Plaster

Material Location: Throughout

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number HMS-21-23-26-29-
32-72-75-81-86

VT4



Description: 12x12 White Vinyl Tile
w/ Dark Mastic

Material Location: West Hall First
Floor

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-22

MISC3



Description: HVAC Duct Tape

Material Location: West Entry
Office Attic/First Floor

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-34

MISC4



Description: Vibration Flex

Material Location: Roof Penthouse

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-35

RM1



Description: Roofing Membrane

Material Location: Gymnasium

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-36

RM2



Description: Roof Core

Material Location: Main Structure

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-37

RM3



Description: Parapet Wall

Material Location: Main Structure

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-38

RM4



Description: Roofing Core

Material Location: Field House

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-39

Not included in the Survey

MISC5



Description: Silver Coat

Material Location: Wood Shop
Vent

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-40

Not included in the Survey

CT4



Description: 1x1 Ceiling Tile /Holes
Stapled

Material Location: Wood Shop
Office

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-43

Not included in the Survey

CT5



Description: 1x1 Ceiling Tile
w/Glue Dots

Material Location: Wood Shop Hall

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-44

Not included in the Survey

CT6



Description: 2x4 Ceiling Tile

Material Location: Wood Shop
Classroom

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-45

Not included in the Survey

WS2



Description: Skim Coat Plaster

Material Location: Wood Shop

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-47, 48, 49

Not included in the Survey

CBM2



Description: Brown Cove base mastic

Material Location: Wood Shop

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-50

Not included in the Survey

MISC7



Description: Exterior Vapor Barrier

Material Location: Wood Shop

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-51

Not included in the Survey

VT10



Description: 12x12 Purple Vinyl Tile w/Tan mastic

Material Location: Field House Classroom

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-53

Not included in the Survey

CT7



**Description: 1x1 Ceiling Tile
w/Brown Glue Dots**

**Material Location: Field House
Classrooms**

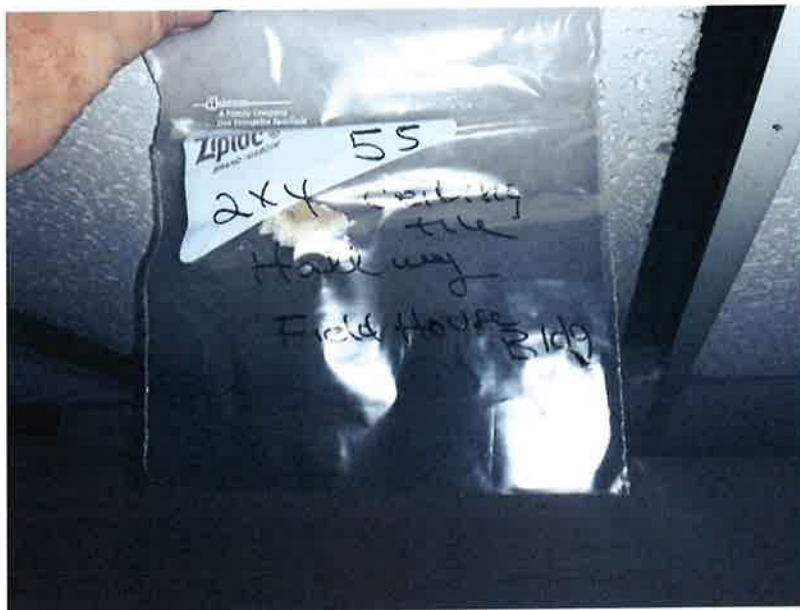
Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-54

Not included in the Survey

CT8



Description: 2x4 Ceiling Tile

Material Location: Field House Hall

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-55

Not included in the Survey

CBM3



Description: Brown Cove Base mastic

Material Location: Field House throughout

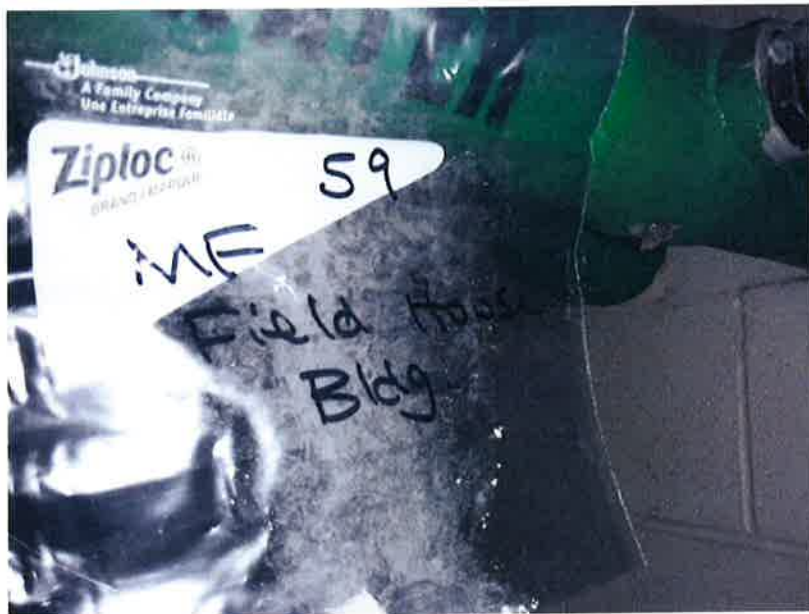
Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-56

Not included in the Survey

TS13



Description: Pipe Insulation

Material Location: Field House Storage

Asbestos Content: None Detected

Estimated Quantity: N/A

Sample Number: HMS-57, 58, 59

Not included in the Survey

SU2



Description: Gray Sink Undercoat

**Material Location: Field House
Classroom #2**

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-60

Not Included in the Survey

MISC8



Description: HVAC Duct Tape

**Material Location: Main Building
Room 105 Ceiling/First Floor**

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-62

MISC09



**Description: Pyrobar
Insulation Sound Proofing
Blocks**

**Material Location:
Throughout the Interior Walls
First and Second Floors**

**Asbestos Content: None
Detected**

Estimated Quantity: N/A

Sample Number: HMS-63

**QC Samples Batta
Laboratories: 95, 96, 97, 98,
99, 100, 107, 108**

MISC09



**Description: Pyrobar
Insulation/ Sound Proofing
Mortar**

**Material Location:
Throughout the Interior Walls
First and Second Floors**

**Asbestos Content None
Detected**

Estimated Quantity: N/A

Sample Number: HMS-64

**QC Samples Batta
Laboratories: 101, 102, 103,
104, 105, 106**

MISC11



Description: HVAC Vibration Flex

Material Location: Fan Room/First Floor

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-66

MISC12



Description: Duct Wrap

Material Location: Stage Mezzanine

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-67

VS3



**Description: Brown Vinyl Sheeting
Burlap Backing w/Vapor Barrier**

**Material Location: Main Structure
Room 209/Second Floor**

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-71

VT12



**Description: 12x12 Beige Vinyl Tile
w/Dark Mastic**

**Material Location: Room 204
Second Floor**

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-73

VS4



Description: Brown Vinyl Sheetting
w/Burlap Backing and Vapor
Barrier

Material Location: Hallway Second
Floor

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-74

CRT1



Description: 1"x1" Tile, Grout,
Mastic

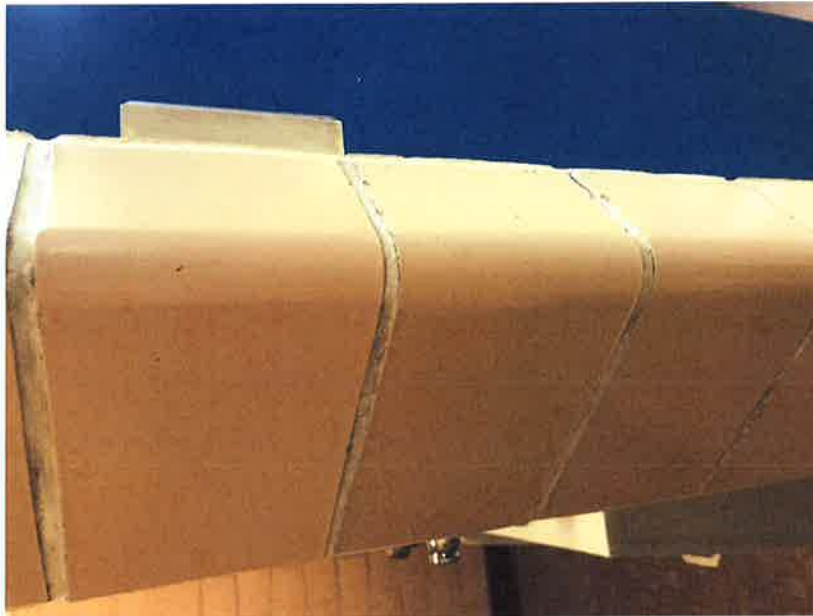
Material Location: Boys Shower
Room

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-79

CRT2



Description: 5"x12" Tile, Grout, Mastic

Material Location: Boys Shower Room

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-80

MISC13



Description: Flooring Overlay

Material Location: Boys Shower Room

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-82

WS3



**Description: Joint Compound
w/Associated Wallboard**

Material Science Room

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-83

MISC14



**Description: Gasket around Dumb
Waiter**

**Material Location: Hallway Second
Floor**

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS- 84

CRT3



Description: Tile, Grout and Mastic

Material Location: Hallway Second Floor

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number HMS-85

CRT4



Description: 1x1 Ceramic Tile, Grout, and Mastic

Material Location: Men's and Women's Shop

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-88

CRT-05

Description: 6x6 Tile Grout and Mastic

Material Location: Men's and Women's Shop

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number HMS 89

Picture not available

Not Included in the Survey

MISC15



Description: CMU Brick and Mortar

Material Location: Field House

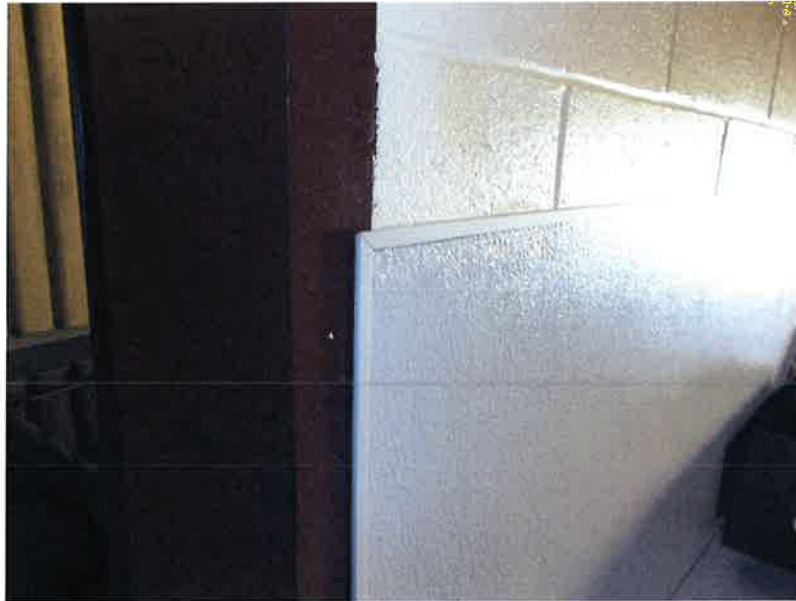
Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number HMS-90

Not Included in the Survey

MA2



Description: Back Splash Mastic

Material Location: Field House

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-91

Not Included in the Survey

MISC16



Description: Field House Wall

Material Location

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number HMS-92

Not Included in the Survey

MISC17



Description: CMU Coating

Material Location: Field House Shower

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: 93

Not Included in the Survey

MISC18



Description: Composite Flooring

Material Location: Field House Shower

Asbestos Content: None Detected

Estimated Quantity: NA

Sample Number: HMS-94

Not Included in the Survey

Table I**Summary of Non-Asbestos Containing Building Materials**

Material Code/Description	Sample Number	Building	Floor	Room	Analytical (Laboratory) Result(s)
VS2	04	Main	1	Cafeteria Restrooms	NAD*
CBM1	05	Main	1-2-3	Throughout	NAD*
MISC1	06	Main	1	Throughout	NAD*
CT1	07,13	Main	1-2-3	Throughout	NAD*
VT3	11	Main	2	Room 101	NAD*
CT2	12	Main	1-2-3	Throughout	NAD*
SU1	14	Main	2	Room 101	NAD*
MISC2	15	Main	2-3	Throughout	NAD*
VS3	17	Main	2	Music Room	NAD*
MA1	18	Main	2-3	Throughout	NAD*
VS4	19	Main	1	Music Room	NAD*
VS5	20	Main	1	Music Room	NAD*
WS1	21, 24, 26, 29, 32, 72, 75, 81, 86	Main	1-2-3	Throughout	NAD*
VT4	22	Main	2	Hallway	NAD*
CT3	33	Main	2	Office West Entry	NAD*
MISC3	34	Main	2	Attic	NAD*
MISC4	35	Main	Roof	Roof	NAD*
RM1	36	Main	Roof	Gym	NAD*
RM2	37	Main	Roof	Roof	NAD*
RM3	38	Main	Roof	Roof Parapet Wall	NAD*
RM5	39	Field House	Roof	Roof	NAD*
MISC5	40	Wood Shop	Roof	Roof	NAD*
CT4	43	Wood Shop	1	Shop office	NAD*
CT5	44	Wood Shop	1	Hall	NAD*
CT6	45	Wood Shop	1	Classroom	NAD*
WS2	47 48 49	Wood Shop	1	Classroom	NAD*
CBM2	50	Wood Shop	1	Classroom	NAD*
MISC7	51	Wood Shop	1	Exterior Wall	NAD*
VT10	53	Field House	1	Classroom 2	NAD*
CT7	54	Field House	1	Classroom 2	NAD*
CT8	55	Field House	1	Hall	NAD*
CBM3	56	Field House	1	Throughout	NAD*
TSI3	57 58 59	Field House	1	Equipment Room	NAD*
SU2	60	Field House	1	Classroom 2	NAD*
MISC8	62	Main	2	Room 105	NAD*
MISC9	63 87 95 96 97 98 99 100 107 108	Main	2	Fan Room	NAD*
MISC10	64 101 102 103 104 105 106	Main	2	Fan Room Throughout	NAD*
MISC11	66	Main	2	Fan Room	NAD*

MISC12	67	Main	2	Stage Mezzanine	NAD*
VS6	71	Main	2	Room 209	NAD*
VT12	73	Main	2	Room 204	NAD*
VS7	74	Main	2	Hallways	NAD*
CRT1	79	Main	1	Boys Shower Room	NAD*
CRT2	80	Main	1	Boys Shower Room	NAD*
MISC13	82	Main	1	Boys Shower Room	NAD*
MISC14	84	Main	2	Hallway	NAD*
CRT3	85	Main	1	Hallways	NAD*
CRT4	88	Shop	1	Restroom	NAD*
CRT5	89	Shop	1	Restroom	NAD*
MISC15	90	Fieldhouse	1	Walls	NAD*
MA2	91	Fieldhouse	1	Room 2	NAD*
MISC16	92	Fieldhouse	1	Room 2	NAD*
MISC17	93	Fieldhouse	1	Shower Room	NAD*
MISC18	94	Fieldhouse	1	Shower Room	NAD*

Not Included in the Survey

Table II

Summary of TCLP Results

A material "fails" the TCLP when there is greater than 5.0 parts per million (ppm) of lead in the leachate. The TCLP sample taken from the residence had the following results:

Building	TCLP Result (ppm)
NA	To be determined prior to Renovation

Table III

Summary of PCB Containing Light Ballasts in Fluorescent Light Fixtures

No PCB Light ballasts were identified during this investigation. The School District has a replacement program in place and only electronic ballasts were found.



Asbestos
Laboratory
Results:

See Attachment A

Sample Location
Maps:

See Attachment B

Asbestos
Containing
Material Maps:

See Attachment C

Lead Results and
Maps:

See Attachment D

AHERA Inspector
Certification:

See Attachment E

INSPECTOR
ENDORSEMENT:


Dennis Rauschenberg

Project Manager
AHERA Building Inspector/Management Planner

PROJECT
REVIEW:


Donna McNeal
Laboratory Director /CEO

**ANALYSIS
METHOD:**

Polarized Light Microscopy

PARAMETERS:

Southwest Clean Air Agency (SWCAA) and Washington State Department of Labor and Industries (L&I) regulations require an inspection of all buildings for the presence of asbestos-containing materials (ACM) prior to renovation and demolition.

ACM is identified as those building materials containing greater than one percent (>1.0%) of asbestos as verified by laboratory analysis.

According to Washington Administrative Code (WAC) 296-62-07721 Communication of Hazards to Employees, prior to the start of work, a building owner must identify the presence, location, and quantity of ACM and/or presumed ACM (PACM) in the work area. This information must be communicated to contractors bidding on work, contractors performing other work, employees and tenants in or adjacent to the work area. The Southwest Clean Air Agency Regulation III, Article 4 requires that an asbestos survey be conducted prior to any renovation or demolition of existing buildings. This survey was intended to meet these regulatory requirements.

Lead based coatings have been used on and in this structure. Washington State Department of Labor and Industries (L&I) regulation WAC 296-155-176 Lead, requires that workers be protected from exposure during the demolition and removal of materials that contain lead in any detectable amount.

In addition, the Washington State Department of Ecology (DOE) requires that waste from demolition or renovation activities that exhibits toxic characteristics be analyzed using the Toxic Characteristic Leaching Procedures (TCLP) (40 CFR 261.24 Toxicity Characteristic).

DEFINITIONS:

ACM is subdivided into three types;

(1) Surfacing Materials: These are defined as those materials that are sprayed-on, troweled-on or otherwise applied to surfaces including, but not limited to, lath and plaster, acoustical plaster on ceilings, paints, fireproofing materials on structural members or other materials on surfaces applied for decorative purposes.

(2) Thermal System Insulation (TSI): These materials are defined as those applied to pipes, fillings, boilers, tanks, ducts or other structural components to prevent heat loss or gain.

(3) Miscellaneous Materials: All other building materials that may be ACM but not surfacing materials or TSI fall into this category.

LIMITATIONS:

During demolition it is possible that additional suspect ACM may be discovered within assemblies and systems that were not accessible at the time of this survey. Should any such suspect material be discovered, an AHERA-certified building inspector will have to sample and test the materials to provide evidence that they are non-asbestos containing.

NOW Environmental Services is neither responsible for the classification of materials that were not identifiable with reasonable diligence at the time of this inspection, nor for the identification of materials beyond the scope for this project as we understood it at the time of this survey.

All square/lineal footage figures are approximate rough estimates to provide perspective and scope. Site sketches, when provided, are not to scale unless otherwise indicated.

Disclaimer

This report and its contents are limited to the scope and activities performed at the subject property as described. We represent that our services were performed within the limits prescribed by applicable regulations and in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representation is made to the client, expressed or implied, and no warranty or guarantee is included or intended.

Attachment A

202792

CLIENT: Kelso School District	SITE: Huntington Middle School	RELINQUISHED BY: <u>DLR</u>
ADDRESS: On File	ADDRESS: 500 Redpath Street Kelso, WA	DATE / TIME: <u>4-16-20</u> <u>8:00 AM</u>
TELEPHONE:	INSPECTOR: Dennis Rauschenberg	RECEIVED BY:
FAX:	DATE SAMPLED: <u>2-16-20</u>	DATE / TIME:
CELLULAR:	4 HOUR 24-HOUR 3DAY	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 01		GREEN 9x9/white slashes DARK MASTIC	VT ¹	CON	Kit	TBD see map				
HMS 02		MULTI-COLORED 12x12	VT ²	CON	CAFE	TBD see map				
HMS 03		VS 9x9 BROKEN MASTIC ROCK	VS ¹	CON	Kit	12x12 see map				
HMS 04		VS 9x9 SAND MASTIC PATTERN	VS ²	CON	RR CAFE	6x6 x2				
HMS 05		COVE BASE MASTIC WHITE OVER BROWN	CBM ⁰¹	CON CMU PIAST.	T.O. CAF-KIT R.R./HALL	TBD				
HMS 06		BRICK & MORTAR	MISC ⁰¹		T.O.	—				
HMS 07		1x1 CEILING TILE w/ BROWN GIVE DOTS	CT ¹	CON	T.O. see map	TBD				
HMS 08		PIPE INSULATION 2" LINES DOMESTIC	TS ¹	METAL	EAST HALL	12 FT VISIBLE				

CLIENT: Kelso School District	SITE: Huntington Middle School	RELINQUISHED BY: <u>DER</u>
ADDRESS: On File	ADDRESS: 500 Redpath Street	DATE / TIME: <u>4-10-20</u> <u>8:00am</u>
	Kelso, WA	
TELEPHONE:	INSPECTOR: Dennis Rauschenberg	RECEIVED BY:
FAX:	DATE SAMPLED: <u>2-16-20</u>	DATE / TIME:
CELLULAR:	4 HOUR 24-HOUR 3DAY	

SAMPLE

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 09		Pipe Insulation 2' DOMESTIC	TST	METAL	EAST HALL	12 FT VISIBLE				
HMS 10		" "	"	"		1 1ST FLOOR				
HMS 11		12X12 VT- White w/TAN SHAKES TAN MASTIC	VT3	CON	RM 101	SEE MAP				
HMS 12		2X4 CEILING TILE	CT2	Hang	"	—				
HMS 13		1X1 Ceiling tile w/ BROWN Glue Dots	CT1	CON	"	SEE MAP				
HMS 14		GRAY SINK UNDER COATING	SU1	METAL	"	1				
HMS 15		CHALK BOARDS	MIX2	—	"	2 4X12				
HMS 16		Green 9X9/white SHAKES DARK MASTIC	VT1	CON	"	SEE MAP				

CLIENT: Kelso School District	SITE: Huntington Middle School	RELINQUISHED BY: <u>DLR</u>
ADDRESS: On File	ADDRESS: 500 Redpath Street Kelso, WA	DATE / TIME: <u>4-10-20</u> <u>8:00 AM</u>
TELEPHONE:	INSPECTOR: Dennis Rauschenberg	RECEIVED BY:
FAX:	DATE SAMPLED: <u>2-17-20</u>	DATE / TIME:
CELLULAR:	4 HOUR 24-HOUR 3 DAY	

Sample

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 17		Red VS Burlap / Mastic	VS ³	CON	MUSIC RM	see map				
HMS 18		CARPET Mastic TAN	MA ¹	VS ³ CON	"	"				
HMS 19		GREEN VS BURLAP BAKING	VS ⁴	CON.	MUSIC RM 2	"				
HMS 20		Blue VS BURLAP BACK	VS ⁵	CON	MUSIC RM 4					
HMS 21		S.C. PLASTER	US ¹	-	MUSIC RM					
HMS 22		VI White w/ tan SLASHES DALL Mastic	VT ⁴	CON	WEST HALL	see map.				
HMS 23		P.P. INSULATION STEAM 4"	TSJ ²	METAL	RM 109	10 FT.				
HMS 24		Se PLASTER	US ¹	-	"	-				

CLIENT: Kelso School District	SITE: Huntington Middle School	RELINQUISHED BY: <u>NLR</u>
ADDRESS: On File	ADDRESS: 500 Redpath Street	DATE / TIME: 4-10-20 - 8:00 AM
	Kelso, WA	
TELEPHONE:	INSPECTOR: Dennis Rauschenberg	RECEIVED BY:
FAX:	DATE SAMPLED: 2-17-20	DATE / TIME:
CELLULAR:	4 HOUR 24-HOUR 3 DAY	

Sample

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 25		GRAY 9x9 DARK mastic	VT5	CON	RM 110	SEE MAP				
HMS 26		SC PLASTER	WS1	-	"	-				
HMS 27		BROWN 9x9 DARK mastic	VT6	CON	RM 107	SEE MAP				
HMS 28		PIPE INSULATION	TSJ2	METAL	RM 111	10 FT x 2				
HMS 29		SC PLASTER	WS1	-	RM 106	-				
HMS 30		PIPE INSULATION	TSJ2	METAL	RM 112	10 FT				
HMS 31		RED 9x9 DARK mastic	VT7	CONCRETE	RM 112	SEE MAP				
HMS 32		SC PLASTER	WS1	-	RM 112	✓				

CLIENT: Kelso School District	SITE: Huntington Middle School	RELINQUISHED BY: <u>D.R.</u>
ADDRESS: On File	ADDRESS: 500 Redpath Street Kelso, WA	DATE / TIME: <u>4-10-20 - 8:00 AM</u>
TELEPHONE:	INSPECTOR: Dennis Rauschenberg	RECEIVED BY:
FAX:	DATE SAMPLED:	DATE / TIME:
CELLULAR:	4 HOUR 24-HOUR 3DAY	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 33		2x4 ceiling tile 2x2 PATTERN	CT3	hung	OFFICE INT WESTERN	—				
HMS 34		HVAC DUCT TAGS	MISC03	METAL	ATTIC OFFICE					
HMS 35		HVAC - FAN ROOM FLEX / VIBRATION	MISC04	METAL	ROOF FAN ROOM					
HMS 36		ROOF CORE SAMPLE MEMBRANE	RM1	ROOF WOOD	SEE MAP					
HMS 37		ROOF core SAMPLE RUBBER	RM2	ROOF CONCRETE	SEE MAP					
HMS 38		PARTICIP WALL	RM3	PART. WALL	SEE MAP					
HMS 39		B.U.R.	RM4	WOOD	SEE MAP					
HMS 40		SILVER COAT	MISC05	RM4	WALL					

CLIENT: <u>KELSO S.P.</u>	SITE: <u>Huntington Middle</u>	RELINQUISHED BY: <u>OK</u>
ADDRESS: <u>6PKH</u>	ADDRESS: <u>5001 Res Path St.</u>	DATE / TIME: <u>4-10-20 8:00 AM</u>
TELEPHONE: <u>1</u>	<u>Kelso, W.Va.</u>	
FAX: <u>1</u>	INSPECTOR: <u>D. Raschke</u>	RECEIVED BY:
CELLULAR:	DATE SAMPLED: <u>4-8-20</u>	DATE / TIME:
	4 HOUR	24-HOUR
		3 DAY

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 41		B.V.R.	RM5	WOOD	Field House					
HMS 42		VT 9x9 Brown w/ Dark Brown Grout	VT8	concrete	WOOD SHOP CLASS					
HMS 43		1x1 ceiling Tile. Hole Pattern	CT4	STAINED	SHOP OFFICE					
HMS 44		1x1 ceiling Tile Smooth	CT5	STAINED	HALL					
HMS 45		2x4 ceiling Tile	CT6	hung	CLASS ROOM					
HMS 46		Window Putty	MISC06	ext W	ext Windows	1 count.				
HMS 47		SC PLASTER	WS ²	-	CLASS ROOM					
HMS 48		SC PLASTER	WS ²		CLASS ROOM					

CLIENT: Kelo S.D.	SITE: Hwangyan Muddy Sand	RELINQUISHED BY: DLR
ADDRESS:	ADDRESS: 500 Red Path St. Kelso, WA	DATE / TIME: 4-10-20 - 800am
TELEPHONE:	INSPECTOR: D Harschenberg	RECEIVED BY:
FAX:	DATE SAMPLED:	DATE / TIME:
CELLULAR:	4 HOUR	24-HOUR
		3DAY

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 49		SC PLASTER	WS2	-	WOOD SHOP					
HMS 50		CBM BROWN	CBM2	PLASTER	CLASS ROOM					
HMS 51		EXTERIOR VAPOR BARRIER	MS07	WOOD	EXT. WOOD SHOP					
HMS 52		12x12 ORANGE DARK MASTIC	VT9	CONCRETE	FIELD HOUSE HALLS	see notes				
HMS 53		PURPLE 12x12 TMA MASTIC	VT10	CONCRETE	CLASS RM #2	see notes				
HMS 54		1x1 ceiling tile DARK blue dots	CT7	W.B	CLASS #1 CLASS #2	24x24 2				
HMS 55		2x4 ceiling tile	CT8	WALL	HALL	/				
HMS 56		CBM TRANS	CBM3	CMU	T.O	/				

CLIENT: Kelso S.D.	SITE: Huntington Middle School	RELINQUISHED BY: DLR
ADDRESS: 500 Redpath St.	ADDRESS: Kelso, WA	DATE / TIME: 4-10-20 9:00 AM
TELEPHONE:	INSPECTOR: D. Arsenberg	RECEIVED BY:
FAX:	DATE SAMPLED: 4-8-20	DATE / TIME:
CELLULAR:	4 HOUR	24-HOUR
	3 DAY	

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 57		HARD FILING ASSOC W/ 1" AND 2" LINES	TSI ³	METAL	EQUIPMENT ROOM	12 ON 1" 12 ON 2"				
HMS 58		"	"	"	"	↓				
HMS 59		"	"	"	"	↓				
HMS 60		COZAL SINK UNDER COAT	SL ²	METAL	CLASS ROOM #2					
HMS 61		MATL BIDA BEIGE DAEIL METAL	VT ¹¹	CONCRETE	ROOM 109	UNDER CROZ.				
HMS 62		DULT TAPE	MISC ⁸	METAL	ROOM 109 ceiling	10 SF.				
HMS 63		PYROBAC PANELS	MISC ⁹	—	FAN ROOM					
HMS 64		PYROBAC MOTOR	MISC ¹⁰	PYROBAC	"					

203932

NY 20-0073

CLIENT: Kelso SD	SITE: Hungarston middle School	RELINQUISHED BY: DLA
ADDRESS: 800 Filz	ADDRESS: 500 Red Path St.	DATE / TIME: 4-10-20 8:20am
TELEPHONE:	INSPECTOR: D. A. Schenberger	RECEIVED BY:
FAX:	DATE SAMPLED: 4-9-20	DATE / TIME:
CELLULAR:	4 HOUR	24-HOUR
		3 DAY

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 65		Co Pich Insulation	TSI ⁴	METAL	FAN ROOM	4 L.F.	-	40	CHAR	cell
HMS 66		HVAC FLEX	MISC ¹¹	METAL	FAN ROOM	-	-	100	-	cell
HMS 67		DUCT WRAP HVC	MISC ¹²	METAL	STAGE MEZZ.	-	-	100	-	-
HMS 68		PIPE WRAP Heating	TSI ⁵	METAL	ATTIC ABOVE GYM	120 LF	-	60	CHAR	cell
HMS 69		"	"	"	"	↓	-	100	CHAR	cell
HMS 70		"	"	"	"	↓	-	60	CHAR	cell
HMS 71		US DUCT WRAP BACKING TAN MASTIC DARK MASTIC ROOFING GARDEN BARRIER	VS ³ VS ⁶	CONCRETE	RM 209	-	-	100	-	cell
HMS 72		SC plaster	WS ¹	-	STAN closet	-	-	100	-	-

V20-0023

CLIENT: Kello S.D.	SITE: HUNTER MIDDLE SCHOOL	RELINQUISHED BY: DLR
ADDRESS: ON FILE	ADDRESS: 500 RED PATH. S.T.	DATE / TIME: 4-10-20 8:00 AM
	Kello, WA	
TELEPHONE:	INSPECTOR: DGR	RECEIVED BY:
FAX:	DATE SAMPLED: 4-9-20	DATE / TIME:
CELLULAR:	4 HOUR	24-HOUR
		3DAY

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 73		12x12 Beige UT WITH BROWN SLATES DARK MASTIC	UT12	CON	RM. 204					
HMS 74		US BULDOZER DARK MASTIC VAPOR BARRIER	US3	CON	1st FLR. 2nd FLOOR					
HMS 75		SC PLASTER	WS1	-	201					
HMS 76		PIPE INS.	TS16	MEAN	TUNNELS					
HMS 77		"	"	"						
HMS 78		"	"	"						

CLIENT NAME: KLSO S.D.	SITE ADDRESS: 500 Red Path	RELINQUISHED BY: Dan
ADDRESS: 60 FIVE	RD	DATE / TIME: 7-20-20
TELEPHONE: CARM SCHIMMEL	KELSO WA.	RECEIVED BY: Dan
FAX:	INSPECTOR: DRAISCHENBERG	DATE / TIME: 7-20-20
CELLULAR:	DATE SAMPLED: 7-20-20	
	4 HOUR	24-HOUR
		3 DAY

205376

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	EACH LOCATION OR MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
11MS-79	118	141 TILE - GROUT MASTIC	CR1	concrete	Boys Shower RM				-	
11MS-80	119	5x12 TILE GROUT MASTIC	CR2	concrete	"				-	
11MS-81	120	SKIN COAT ceiling GROUT	MASTIC WS	concrete	"				-	
11MS-82	121	FLOORING OVERLAY	MS3	concrete	"				-	
11MS-83	122	SC WB	WS3	-	Severed				-	
11MS-84	123	GRABER AROUND Dumbbells Door	MS4 MS4	metals	10LF				-	
11MS-85	124	4x4 TILE GROUT & MASTIC	MAST3	concrete	T.O HALLS				-	
11MS-86	125	81MS T.O / ceiling	WS1	metals	T.O ceiling				-	

CLIENT NAME: Kelsa, SD
ADDRESS: On File

SITE ADDRESS: Saw Raptor Rd.
Kelsa, IA

RELINQUISHED BY: Doc
DATE / TIME: 7-20-20

TELEPHONE:

INSPECTOR: D. R. Schenck

RECEIVED BY: Doc

FAX:

DATE SAMPLED: 7-8-20

DATE / TIME: 7-20-20

CELLULAR:

4 HOUR 24-HOUR 3 DAY

205376

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	EACH LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBERS
HMS 126	126	Pure Baz	MISC 16	-	T.O. WALLS	1	-	-	-	-
HMS 84	127	1x1 Ceramic Floor Tile Grout & Mastik	CRT-A	BE concrete	WOOD WORKERS SHED		-	-	-	-
HMS 84	128	6x6 Tile core Base Grout & Mastik	CRT-B	W.B.	"		-	-	-	-
HMS 96	129	BRICK CMU & mortar	MISC 16	-	FIELD HOUSE WALLS		-	-	-	-
HMS 91	130	BRICK SPLASH MASTIC	MA 2	CMU	FIELD HOUSE		-	-	-	-
HMS 92	131	SPECIAL EPD BRICK FIELD HOUSE WALL	MISC 16	WOOD	FIELD HOUSE		-	-	-	-
HMS 93	132	CMU COATING	MISC 16	CMU	FIELD HOUSE SHOWER		-	-	-	-
HMS 94	133	Composite Flooring	MISC 16	WOOD	" SHOWER		-	-	-	-



ORION Environmental Services

34004 Ninth Avenue South, Suite A12, Federal Way, WA 98003

Phone: (253) 952-6717 • Fax: (253) 927-4714

Email: info@oriones.net • Web: www.oriones.net

WBE W2F9219763

Polarized Light Microscopy Test Report

EPA Method 600/R-98/116

Client: Kelso School District

Address: 601 Crawford St, Kelso, WA 98606

Attention: Gary Schimmel

Project Name: Huntington Middle School

Project Number: N20-0073

Rpt. Date: 5/25/2020

Page: 1 of 8

Invoice: 203932

Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS01-a	20200526-74	Green/White Slashes Vinyl Tile		2	Chrysotile	
HMS01-b		Dark Mastic		3	Chrysotile	cellulose
HMS02-a	20200526-75	Multi Colored Vinyl Tile		ND		
HMS02-b		Dark Mastic		<1	Chrysotile	cellulose
HMS03	20200526-76	V.S. w Gray Felt Backing; Non Separable Mastic		25	Chrysotile	cellulose
HMS04-a	20200526-77	Sand Pattern Vinyl Sheetting w/ Gray Felt Backing		ND		cellulose
HMS04-b		Mastic		ND		cellulose
HMS05-a	20200526-78	White Cove Base Mastic		ND		cellulose
HMS05-b		Brown Mastic		ND		
HMS06-a	20200526-79	Brick		ND		
HMS06-b		Mortar		ND		
HMS07-a	20200526-80	Ceiling Tile		ND		cellulose
HMS07-b		Brown Glue Dots		ND		cellulose
HMS08-a	20200526-81	Pipe Insulation		20	Chrysotile	cellulose
HMS08-b				15	Amosite	
HMS09-a	20200526-82	Pipe Insulation		20	Chrysotile	cellulose
HMS09-b				10	Amosite	
HMS10-a	20200526-83	Pipe Insulation		20	Chrysotile	cellulose

Polarized Light Microscopy Test Report (cont.)

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0073

Rpt. Date: 5/25/2020
Page: 2 of 8
Invoice: 203932
Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS10-b				15	Amosite	
HMS11-a	20200526-84	White w Tan Slashes Vinyl Tile		ND		
HMS11-b		Tan Mastic		ND		cellulose
HMS12	20200526-85	Ceiling Tile		ND		cellulose
HMS13-a	20200526-86	Ceiling Tile		ND		cellulose
HMS13-b		Brown Glue Dots		ND		cellulose
HMS14	20200526-87	Gray Sink Undercoating		ND		cellulose
HMS15	20200526-88	Chalk Board		ND		
HMS16-a	20200526-89	Green/White Slashes Vinyl Tile		2	Chrysotile	
HMS16-b		Dark Mastic		3	Chrysotile	cellulose
HMS17-a	20200526-90	Red Vinyl Sheeting w/ Burlap Backing		ND		cellulose
HMS17-b		Vapor Barrier		ND		cellulose
HMS17-c		Mastic		ND		cellulose
HMS18	20200526-91	Tan Carpet Mastic		ND		man-made fibers
HMS19-a	20200526-92	Green Vinyl Sheeting w Burlap Backing		ND		cellulose
HMS19-b		Mastic		ND		cellulose
HMS20-a	20200526-93	Blue Vinyl Sheeting w/ Burlap Backing		ND		cellulose
HMS20-b		Mastic		ND		cellulose
HMS21-a	20200526-94	Skim Coat		ND		
HMS21-b		Plaster	crush	ND		

Polarized Light Microscopy Test Report (cont.)

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0073

Rpt. Date: 5/25/2020
Page: 3 of 8
Invoice: 203932
Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS22-a	20200526-95	White Vinyl Sheeting w/ Tan Slashes	crush	ND		
HMS22-b		Dark Mastic		ND		
HMS23-a	20200526-96	Pipe Insulation		10	Amosite	cellulose
HMS23-b				8	Chrysotile	
HMS24-a	20200526-97	Skim Coat		ND		
HMS24-b		Plaster		ND		
HMS25-a	20200526-98	Gray Vinyl Tile	crush	2	Chrysotile	
HMS25-b		Dark Mastic		2	Chrysotile	
HMS26-a	20200526-99	Skim Coat		ND		
HMS26-b		Plaster	crush	ND		
HMS27-a	20200526 -100	Brown Vinyl Tile	crush	2	Chrysotile	
HMS27-b		Dark Mastic		2	Chrysotile	
HMS28-a	20200526 -101	Pipe Insulation		10	Chrysotile	cellulose
HMS28-b				4	Amosite	
HMS29-a	20200526 -102	Skim Coat		ND		
HMS29-b		Plaster	crush	ND		
HMS30-a	20200526 -103	Pipe Insulation		4	Amosite	cellulose
HMS30-b				6	Chrysotile	
HMS31-a	20200526 -104	Red Vinyl Tile	crush	2	Chrysotile	
HMS31-b		Dark Mastic		<1	Chrysotile	

Polarized Light Microscopy Test Report (cont.)

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0073

Rpt. Date: 5/25/2020
Page: 4 of 8
Invoice: 203932
Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS32-a	20200526 -105	Skim Coat		ND		
HMS32-b		Plaster	crush	ND		
HMS33	20200526 -106	Ceiling Tile		ND		cellulose
HMS34	20200526 -107	HVAC Duct Tape		ND		cellulose
HMS35	20200526 -108	HVAC Flex/Vibration		ND		fiberglass
HMS36	20200526 -109	Roof Core Sample		ND		man-made fibers
HMS37-a	20200526 -110	Built Up Roofing	ash	ND		man-made fibers
HMS37-b		Built Up Roofing	ash	ND		cellulose
HMS37-c		Built Up Roofing	ash	ND		cellulose
HMS37-d		Insulation		ND		cellulose
HMS38-a	20200526 -111	Parapet Wall		ND		man-made fibers
HMS38-b		Felt		ND		cellulose
HMS39-a	20200526 -112	Rolled Roofing	ash	ND		fiberglass/ cellulose
HMS39-b		Felt	ash	ND		fiberglass
HMS40-a	20200526 -113	Vent Sealant Silver Coat		ND		cellulose
HMS40-b		Sealant	ash	ND		cellulose
HMS41-a	20200526 -114	Rolled Roofing	ash	ND		fiberglass/ cellulose
HMS41-b		Felt	ash	80	Chrysotile	cellulose
HMS42-a	20200526 -115	Vinyl Tile w/ Dark Brown Slashes		2	Chrysotile	
HMS42-b		Brown Mastic		3	Chrysotile	cellulose

Polarized Light Microscopy Test Report (cont.)

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0073

Rpt. Date: 5/25/2020
Page: 5 of 8
Invoice: 203932
Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS43	20200526 -116	Hole Pattern Ceiling Tile		ND		cellulose
HMS44-a	20200526 -117	Ceiling Tile		ND		cellulose
HMS44-b		Glue Dot		ND		cellulose
HMS45	20200526 -118	Ceiling Tile		ND		fiberglass/ cellulose
HMS46	20200526 -119	Window Putty		4	Chrysotile	cellulose
HMS47-a	20200526 -120	Skim Coat		ND		cellulose
HMS47-b		Plaster		ND		cellulose
HMS48-a	20200526 -121	Skim Coat		ND		cellulose
HMS48-b		Plaster		ND		cellulose
HMS49-a	20200526 -122	Skim Coat		ND		cellulose
HMS49-b		Plaster		ND		cellulose
HMS50	20200526 -123	Brown Cove Base Mastic		ND		cellulose
HMS51	20200526 -124	Exterior Vapor Barrier		ND		cellulose
HMS52-a	20200526 -125	Orange Vinyl Tile		ND		cellulose
HMS52-b		Tan Mastic		ND		cellulose
HMS52-c		Dark Mastic Remnants		3	Chrysotile	cellulose
HMS53-a	20200526 -126	Purple Vinyl Tile		ND		cellulose
HMS53-b		Tan Mastic		ND		cellulose
HMS53-c		Leveling Compound		ND		cellulose
HMS54-a	20200526 -127	Ceiling Tile		ND		cellulose

Polarized Light Microscopy Test Report (cont.)

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0073

Rpt. Date: 5/25/2020
Page: 6 of 8
Invoice: 203932
Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS54-b		Dark Glue Dots		ND		cellulose
HMS55	20200526-128	Ceiling Tile		ND		cellulose/ fiberglass
HMS56	20200526-129	Tan Cove Base Mastic		ND		cellulose
HMS57	20200526-130	Hard Fitting Associated w/ 1" and 2" Lines		ND		cellulose/ fiberglass
HMS58	20200526-131	Hard Fitting Associated w/ 1" and 2" Lines		ND		cellulose/ fiberglass
HMS59	20200526-132	Hard Fitting Associated w/ 1" and 2" Lines		ND		cellulose/ fiberglass
HMS60	20200526-133	Gray Sink Undercoating		ND		cellulose
HMS61-a	20200526-134	Beige Vinyl Tile		ND		
HMS61-b		Tan Mastic		ND		cellulose
HMS61-c		Dark Mastic Remnants		<1	Chrysotile	cellulose
HMS62	20200526-135	Duct Tape		ND		cellulose
HMS63	20200526-136	Pyrobar Panels		ND		cellulose
HMS64	20200526-137	Pyrobar Mortar		ND		
HMS65	20200526-138	Insulation		40	Chrysotile	cellulose
HMS66	20200526-139	HVAC Flex		ND		cellulose
HMS67	20200526-140	HVAC Duct Wrap		ND		
HMS68	20200526-141	Heating Pipe Wrap		60	Chrysotile	cellulose
HMS69	20200526-142	Heating Pipe Wrap		70	Chrysotile	cellulose
HMS70	20200526-143	Heating Pipe Wrap		60	Chrysotile	cellulose
HMS71-a	20200526-144	Vinyl Sheeting w/ Burlap Backing		ND		cellulose

Polarized Light Microscopy Test Report (cont.)

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0073

Rpt. Date: 5/25/2020
Page: 7 of 8
Invoice: 203932
Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS71-b		Tan Mastic		ND		cellulose
HMS71-c		Dark Mastic Remnants		ND		cellulose
HMS71-d		Vapor Barrier		ND		cellulose
HMS72-a	20200526 -145	Skim Coat		ND		
HMS72-b		Plaster	crush	ND		
HMS73a	20200526 -146	Beige Vinyl Tile	crush	ND		
HMS73-b		Dark Mastic		ND		
HMS74a	20200526 -147	Vinyl Sheeting w/ Burlap Backing		ND		cellulose
HMS74-b		Dark Mastic		ND		cellulose
HMS74-c		Vapor Barrier		ND		cellulose
HMS75a	20200526 -148	Skim Coat		ND		
HMS75-b		Plaster		ND		
HMS76	20200526 -149	Pipe Insulation		70	Chrysotile	cellulose
HMS77	20200526 -150	Pipe Insulation		70	Chrysotile	cellulose
HMS78	20200526 -151	Pipe Insulation		60	Chrysotile	cellulose

Polarized Light Microscopy Test Report (cont.)

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0073

Rpt. Date: 5/25/2020
Page: 8 of 8
Invoice: 203932
Date Rcvd: 4/10/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
---------------------	--------------------	-------------------------	---------------------	---	------------------	-----------------

Dup: Laboratory QA/QC Duplicate; M; Mastic [(a), (b), (c), etc.]: Sample layers numbered from front to back.

Comments: For layered samples, each component has been analyzed separately. ND means non-detect for asbestos fibers by EPA Method 600/R-98/116. Disclaimers: PLM has been known to miss asbestos in a small percentage of samples that contain asbestos. Thus, these laboratory results represent due diligence, however negative or <1 % PLM results can not be guaranteed. Per EPA guidelines samples will be archived for 30 days then will be disposed of. This report may only be reproduced in full with written approval of ORION Environmental Services.

Analyzed By (Print)	Date	Reviewed By (Print)	Date
Dennis Rauschenberg	5/21/2020	Donna McNeal	5/25/2020
Analyzed By (Signature)	Time	Reviewed By (Signature)	Time



ORION Environmental Services

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Email: info@oriones.net • Web: www.oriones.net

WBE W2F9219763

Polarized Light Microscopy Test Report
EPA Method 600/R-98/116

Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0287

Rpt. Date: 7/20/2020
Page: 1 of 2
Invoice: 205376
Date Rcvd: 7/20/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS-79-a	20200720-118	1x1 tile	crush	ND		
HMS-79-b		Grout	crush	ND		
HMS-79-c		Mastic		ND		
HMS-80-a	20200720-119	5x12 tile	crush	ND		
HMS-80-b		Grout	crush	ND		
HMS-80-c		Mastic		ND		
HMS-81	20200720-120	Skim coat	crush	ND		cellulose
HMS-82	20200720-121	Flooring overlay	crush	ND		
HMS-83-a	20200720-122	Joint compound		ND		cellulose
HMS-83-b		Wallboard		ND		cellulose
HMS-84	20200720-123	Gasket		ND		cellulose
HMS-85-a	20200720-124	4x4 tile	crush	ND		
HMS-85-b		Grout	crush	ND		cellulose
HMS-85-c		Mastic		ND		cellulose
HMS-86	20200720-125	Plaster	crush	ND		
HMS-87	20200720-126	Pyrobar	crush	ND		cellulose
HMS-88-a	20200720-127	1x1 tile	crush	ND		
HMS-88-b		Gasket	crush	ND		

Polarized Light Microscopy Test Report (cont.)


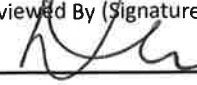
Client: Kelso School District
Address: 601 Crawford St, Kelso, WA 98606
Attention: Gary Schimmel
Project Name: Huntington Middle School
Project Number: N20-0287

Rpt. Date: 7/20/2020
Page: 2 of 2
Invoice: 205376
Date Rcvd: 7/20/2020

Client Sample ID	Orion Sample ID	Material Description	Sample Treatment	% Asbestos Containing Material	Asbestos Type	Other Fibers
HMS-88-c		Mastic		ND		
HMS-89-a	20200720 -128	6x6 tile cove base	crush	ND		
HMS-89-b		Grout	crush	ND		
HMS-89-c		Mastic		ND		
HMS-90-a	20200720 -129	Brick CMU	crush	ND		
HMS-90-b		Mortar	crush	ND		
HMS-91	20200720 -130	Backsplash mastic		ND		
HMS-92	20200720 -131	Special ED wall		ND		cellulose
HMS-93	20200720 -132	CMU coating		ND		
HMS-94	20200720 -133	Composite flooring		ND		

Dup: Laboratory QA/QC Duplicate; M; Mastic [(a), (b), (c), etc.]: Sample layers numbered from front to back.

Comments: For layered samples, each component has been analyzed separately. ND means non-detect for asbestos fibers by EPA Method 600/R-98/116. Disclaimers: PLM has been known to miss asbestos in a small percentage of samples that contain asbestos. Thus, these laboratory results represent due diligence, however negative or <1 % PLM results can not be guaranteed. Per EPA guidelines samples will be archived for 30 days then will be disposed of. This report may only be reproduced in full with written approval of ORION Environmental Services.

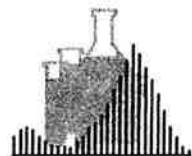
Analyzed By (Print)	Date	Reviewed By (Print)	Date
Dennis Rauschenberg	7/21/2020	Donna McNeal	7/21/2020
Analyzed By (Signature)	Time	Reviewed By (Signature)	Time
			

SAMPLE CUSTODY FORM

PROJECT NUMBER

SAMPLE NO.	LAB NO.	MATERIAL DESCRIPTION	MATERIAL ID	LAYER AND SUBSTRATE	EACH LOCATION OF MATERIAL	QTY.	TREAT	%	TYPE	OTHER FIBER
95		Polybar - white Insulation Block	Misc ¹	Interior wall system	Facility Rest RM Huntingdon N.S					
96										
97										
98		Polybar - white Insulation Block	Misc ²	Interior wall system	Furn RM Huntingdon N.S					
99										
100										
101		Mortar - gray	Misc ³	Interior wall system	Facility Rest room Huntingdon N.S					
102										

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NY ELAP LAB# 11993 for
PCM, PLM, TEM & Lead

batta
LABORATORIES

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A Certified MBE Company

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Web: <http://www.battaenv.com> E-mail: battaenv@battaenv.com



EPA Lab ID #DE004

NVLAP
Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0

Batch#: N/A

COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Page 1 of 3

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 12/30/20

Sampling Data

BLI Project #: R100815

Project Name: ORION ENV-N20-0498 KELSO, WA - S.D. REINSECTIONS - HUNTINGTON M.S.

Date Sampled: 12/28/20

Sampled By: CLIENT

Date Analyzed: 12/30/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1175474	95	Facility Restroom	Prybar - White Insulation Block	n/a	Fibrous Soft Homogeneous	White	7% Cellulose 93% Non-fibrous Material	No Asbestos Found
1175475	96	Facility Restroom	Prybar - White Insulation Block	n/a	Fibrous Soft Homogeneous	White	10% Cellulose 90% Non-fibrous Material	No Asbestos Found
1175476	97	Facility Restroom	Prybar - White Insulation Block	n/a	Fibrous Soft Homogeneous	White	10% Cellulose 90% Non-fibrous Material	No Asbestos Found
1175477	98	Fan Room	Prybar - White Insulation Block	n/a	Fibrous Soft Homogeneous	White	7% Cellulose 93% Non-fibrous Material	No Asbestos Found
1175478	99	Fan Room	Prybar - White Insulation Block	n/a	Fibrous Soft Homogeneous	White	8% Cellulose 92% Non-fibrous Material	No Asbestos Found

Note 1 Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: PMG

REVIEWED BY: Rue

QA/QC Officer/Signatory

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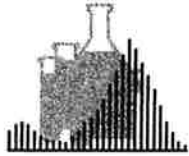
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*The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, LLC assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

*Organically-bound, nonfriable material may interfere with the accurate and reproducible quantification of asbestos. In these cases, the EPA recommends further analysis by a matrix-reduction method. Batta recommends the NY ELAP Item 198.6/198.4 over the Chatfield method. When point count techniques are utilized on organically-bound, nonfriable materials without the EPA-recommended matrix reduction steps, Batta Laboratories assumes no responsibility regarding the accuracy or precision associated with these results. In these cases, Batta employs a modified version of the EPA point count method.

*WRTA refers to a group of fibrous Amphiboles typically associated with 'Libby Amphibole'. Within this classification are: winchite, richterite, tremolite, and actinolite.

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EPA Lab ID #DE004

NVLAP

Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0

Batch#: N/A

COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Page 2 of 3

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 12/30/20

Sampling Data

BLI Project #: R100815

Date Sampled: 12/28/20

Project Name: ORION ENV-N20-0498 KELSO, WA - S.D. REINSECTIONS - HUNTINGTON M.S.

Sampled By: CLIENT

Date Analyzed: 12/30/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1175479	100	Fan Room	Prybar - White Insulation Block	n/a	Fibrous Soft	White	7% Cellulose 93% Non-fibrous Material	No Asbestos Found
					Homogeneous			
1175480	101	Facility Restroom	Mortar	n/a	Granular	Gray	1% Cellulose 99% Non-fibrous Material	No Asbestos Found
					Homogeneous			
1175481	102	Facility Restroom	Mortar	n/a	Granular	Gray	2% Cellulose 98% Non-fibrous Material	No Asbestos Found
					Homogeneous			
1175482	103	Facility Restroom	Mortar	n/a	Granular	Gray	100% Non- fibrous Material	No Asbestos Found
					Homogeneous			
1175483	104	Fan Room	Mortar	n/a	Granular	Gray	100% Non- fibrous Material	No Asbestos Found
					Homogeneous			

Note 1 Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: PMG

REVIEWED BY: 

QA/QC Officer/Signatory

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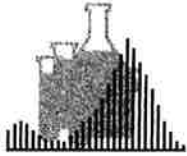
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*WRTA refers to a group of fibrous Amphiboles typically associated with 'Libby Amphibole'. Within this classification are: winchite, richterite, tremolite, and actinolite.

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EPA Lab ID #DE004



Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0

Batch#: N/A

COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Page 3 of 3

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 12/30/20

Sampling Data

BLI Project #: R100815

Date Sampled: 12/28/20

Project Name: ORION ENV-N20-0498 KELSO, WA - S.D. REINSECTIONS - HUNTINGTON M.S.

Sampled By: CLIENT

Date Analyzed: 12/30/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1175484	105	Fan Room	Mortar	n/a	Granular Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1175485	106	Fan Room	Mortar	n/a	Granular Homogeneous	Gray	100% Non-fibrous Material	No Asbestos Found
1175486	107	Room 112	Prybar - White Insulation Block	n/a	Fibrous Soft Homogeneous	White	5% Cellulose 95% Non-fibrous Material	No Asbestos Found
1175487	108	Room 107	Prybar - White Insulation Block	n/a	Fibrous Soft Homogeneous	White	7% Cellulose 93% Non-fibrous Material	No Asbestos Found

Note 1 Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: PMG

REVIEWED BY:

QA/QC Officer/Signatory

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EPA Lab ID #DE004

NVLAP
Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0

Batch#: N/A

COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Page 3 of 3

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 04/29/20

Sampling Data

BLI Project #: R100815

Project Name: ORION ENV-N19-0073 HUNTINGTON MIDDLE SCHOOL - KELSO, WA

Date Sampled: n/a

Sampled By: CLIENT

Date Analyzed: 04/29/20

Sample ID		Client-supplied Data			Analytical Data		Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/ Gross	Color	Non-asbestiform Components	Asbestiform Components
1133386	HMS-71 (Layer 1)	n/a	Mastic	n/a	Soft Homogeneous	Black	100% Non- fibrous Material	No Asbestos Found

Note 1 Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: JJF

REVIEWED BY: 

QA/QC Officer/Signatory

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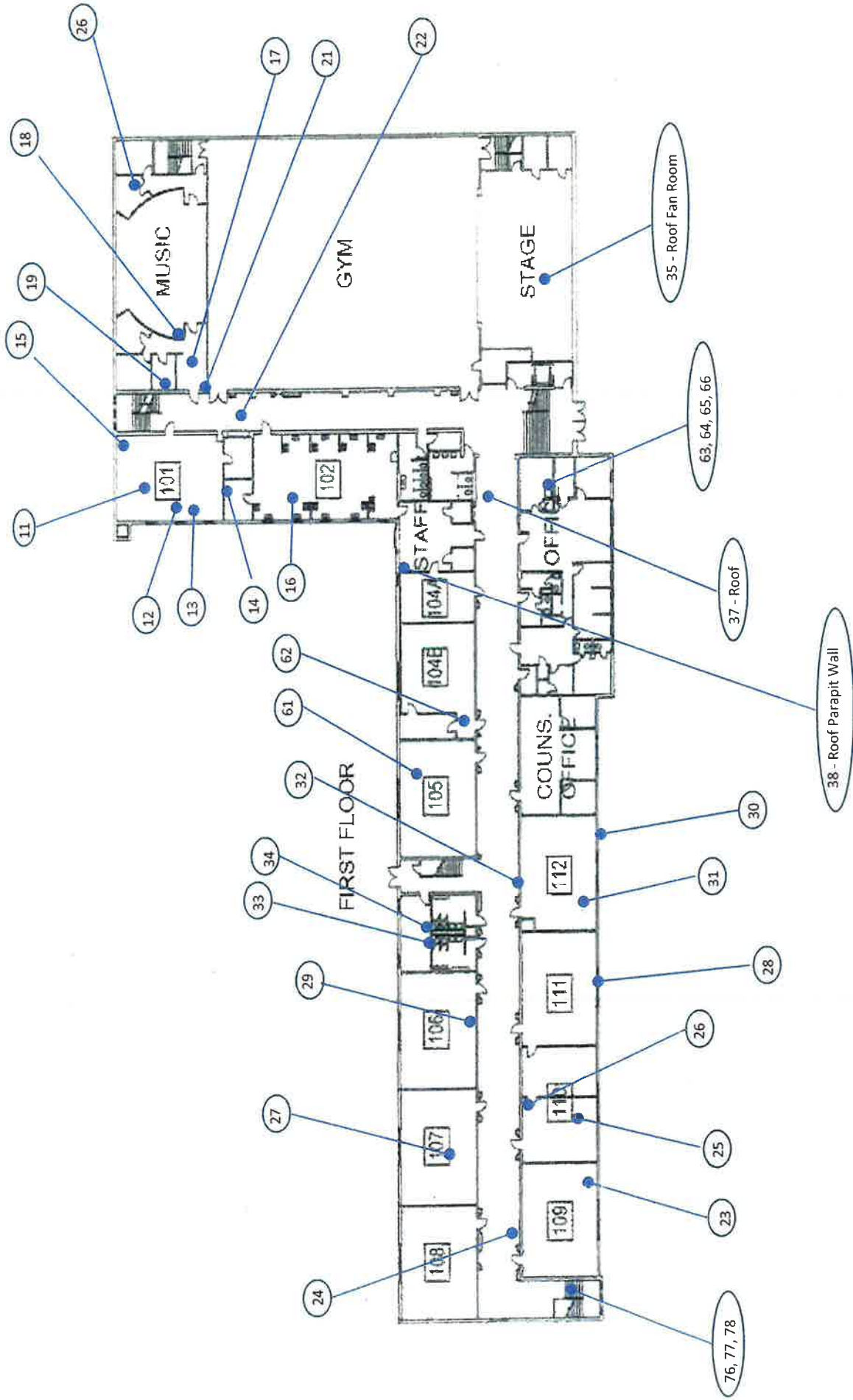
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Attachment B

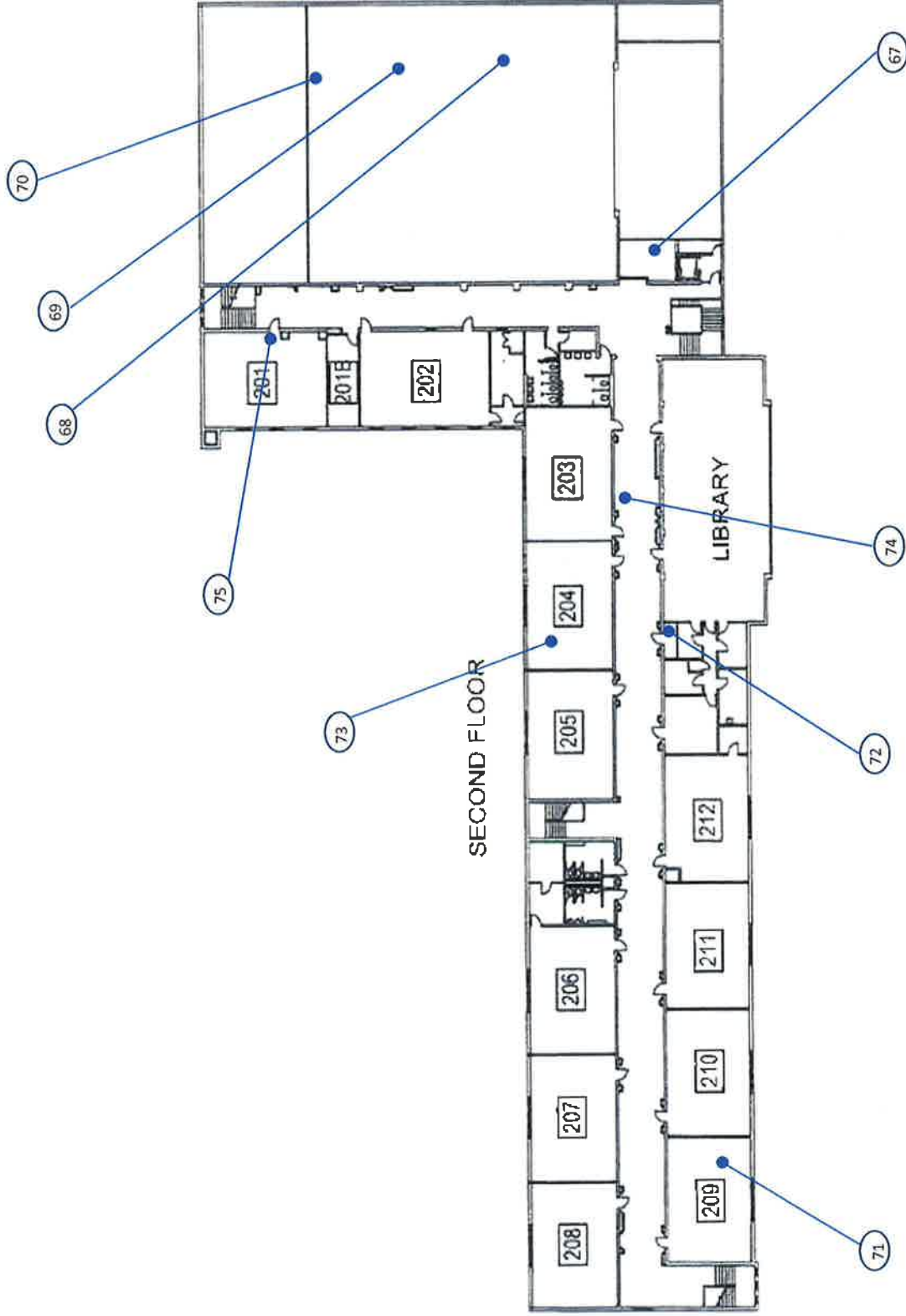
WINTINGTON ELEMENTARY SCHOOL

First Floor Asbestos Samples



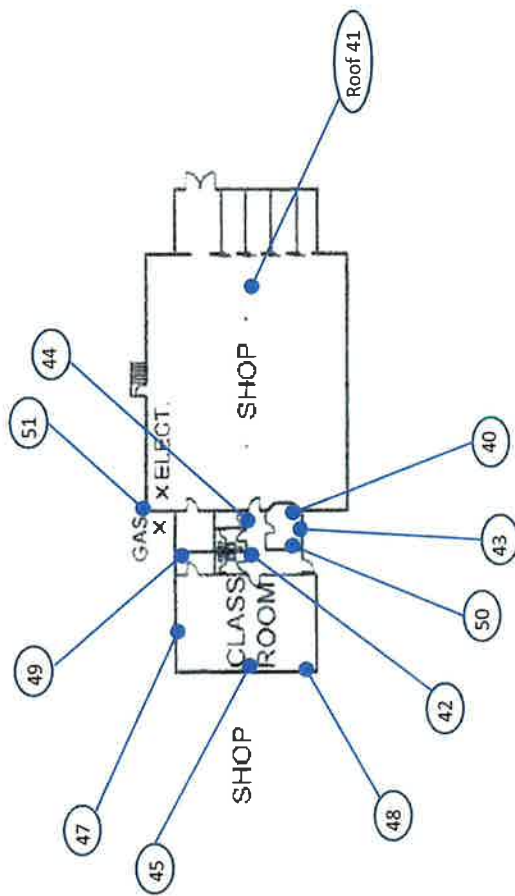
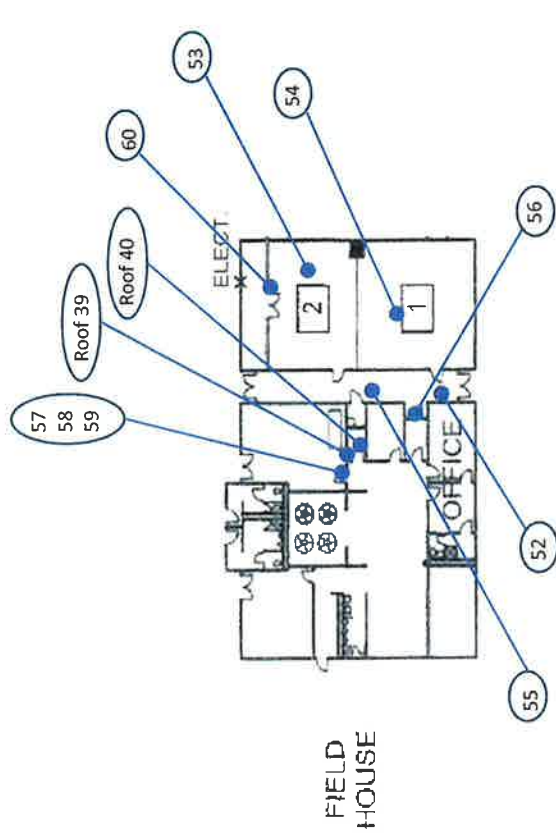
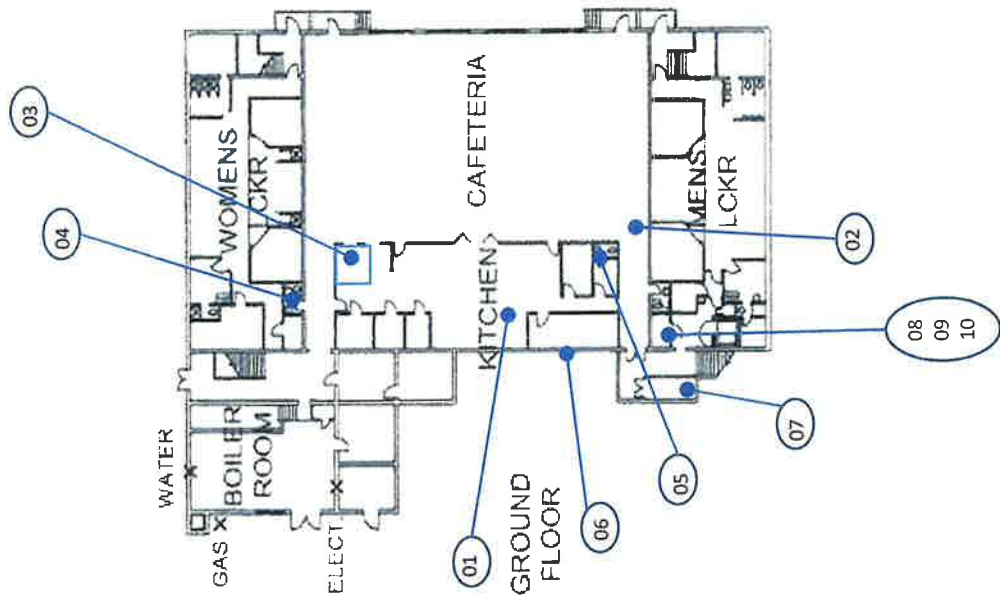
HUNTINGTON ELEMENTARY SCHOOL

Second Floor Asbestos SAMPLES



WUNTINGTON ELEMENTARY SCHOOL

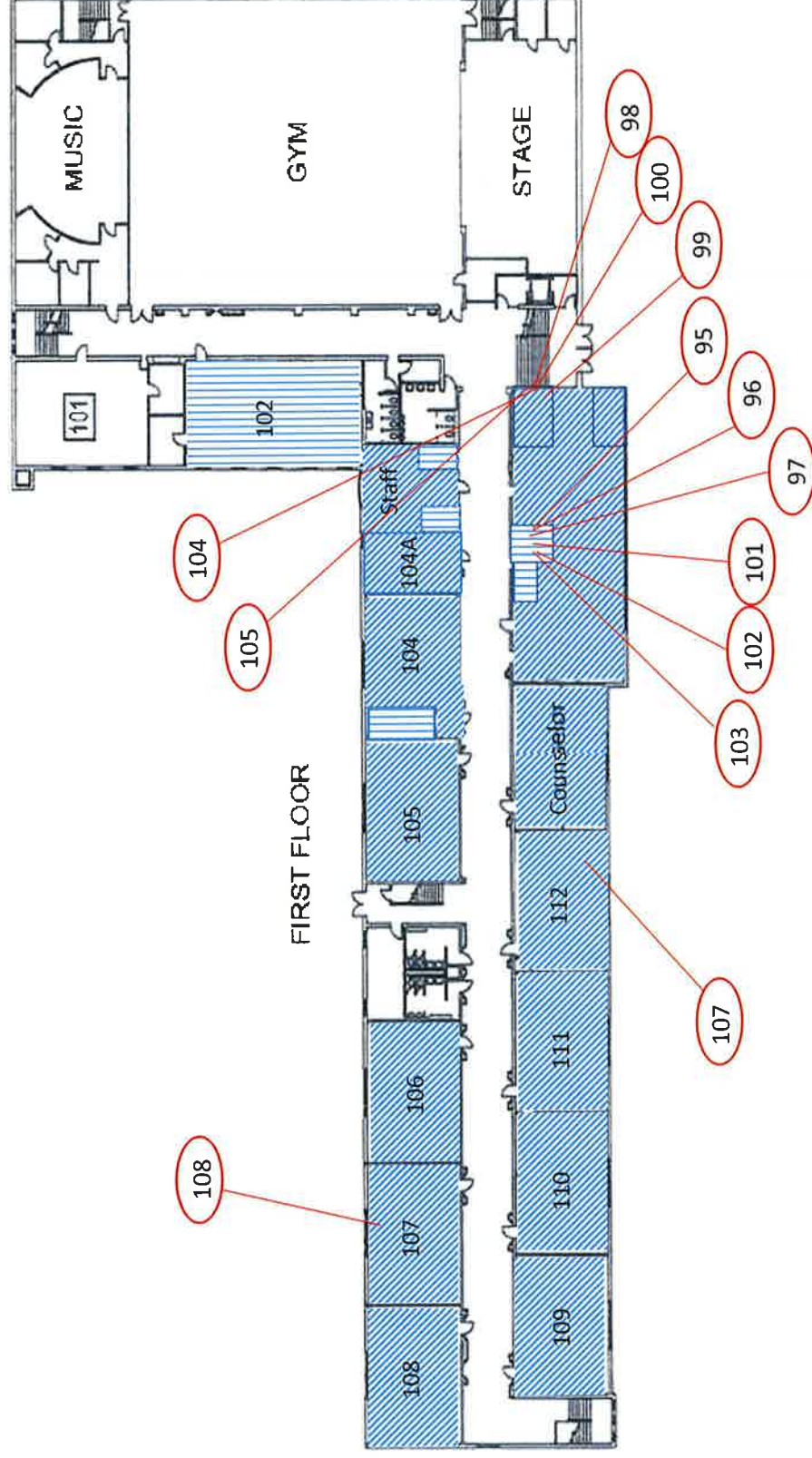
Field House, Shop, Cafeteria Asbestos SAMPLES



HUNTINGTON MIDDLE SCHOOL

Pyrobar Sample Locations QA-QC. Batta Laboratories

First Floor

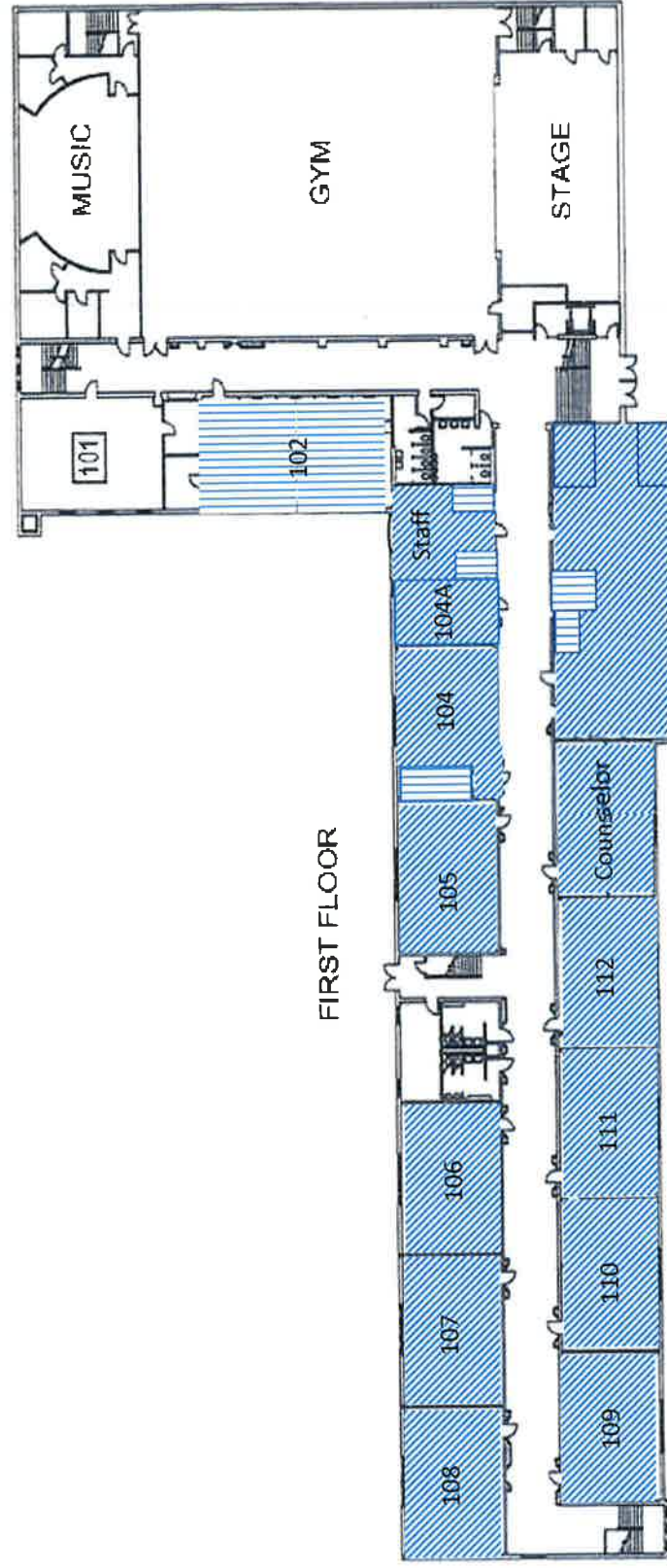


Attachment C

HUNTINGTON MIDDLE SCHOOL

Vinyl Tile & Mastic under Carpet on Concrete = 11,903 Square Feet

Vinyl Tile & Mastic on Concrete = 1,721 Square Feet

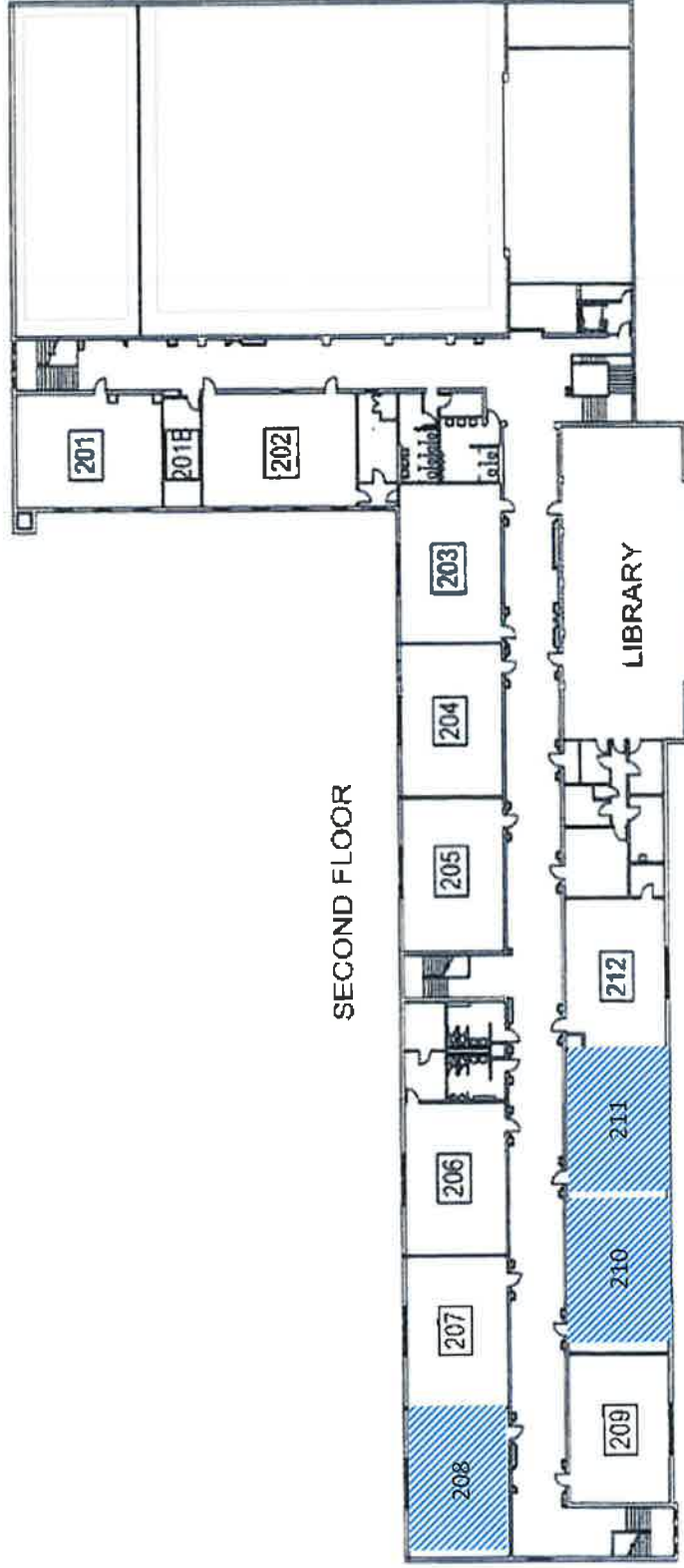


HUNTINGTON MIDDLE SCHOOL

Second Floor POSITIVE Asbestos Locations

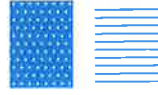
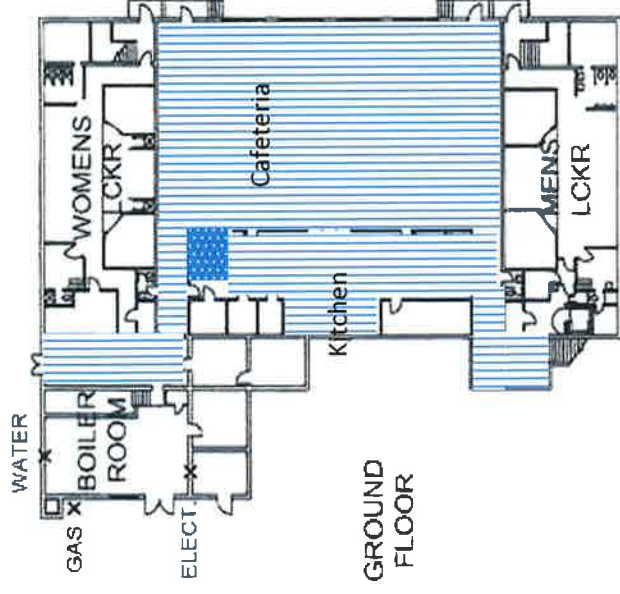


Vinyl Tile & Mastic Under Carpet = 2,687 Square Feet



HUNTINGTON MIDDLE SCHOOL

Cafeteria POSITIVE Asbestos Locations



Vinyl Sheetting (VS) - Kitchen, 144 square feet on concrete

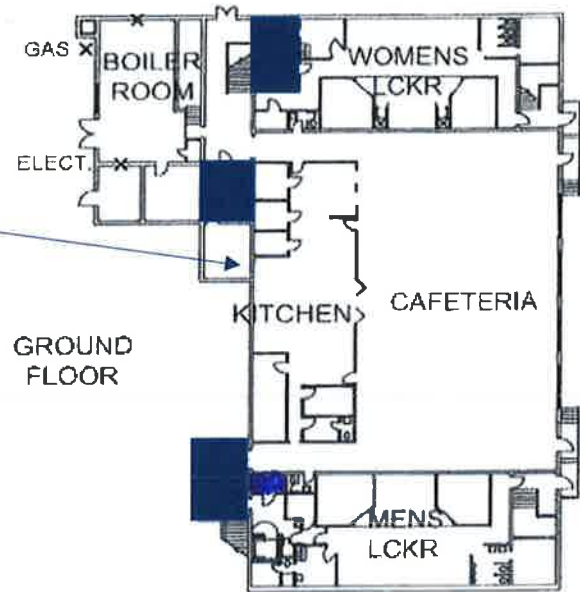
Vinyl Tile (VT) - Vinyl Tile & Mastic on Concrete = 8,000 Square Feet

HUNTINGTON MIDDLE SCHOOL

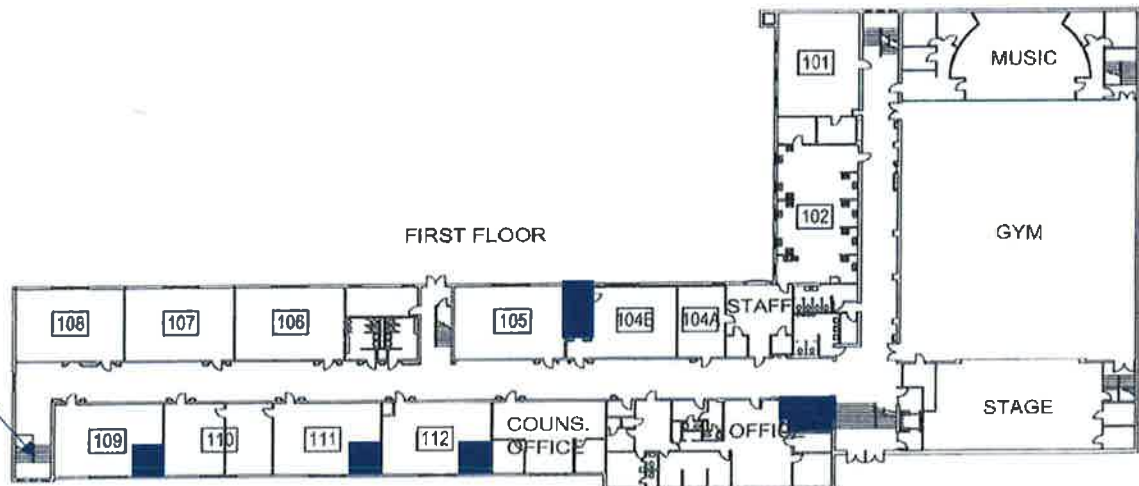
Location of Visible Thermal System Insulation Exist: 2" to 8" lines = 800 Linear Feet

There is an additional 3,000 Linear Feet of 4" to 8" domestic and steam lines hidden in the hard lid ceiling, chases and utility tunnels

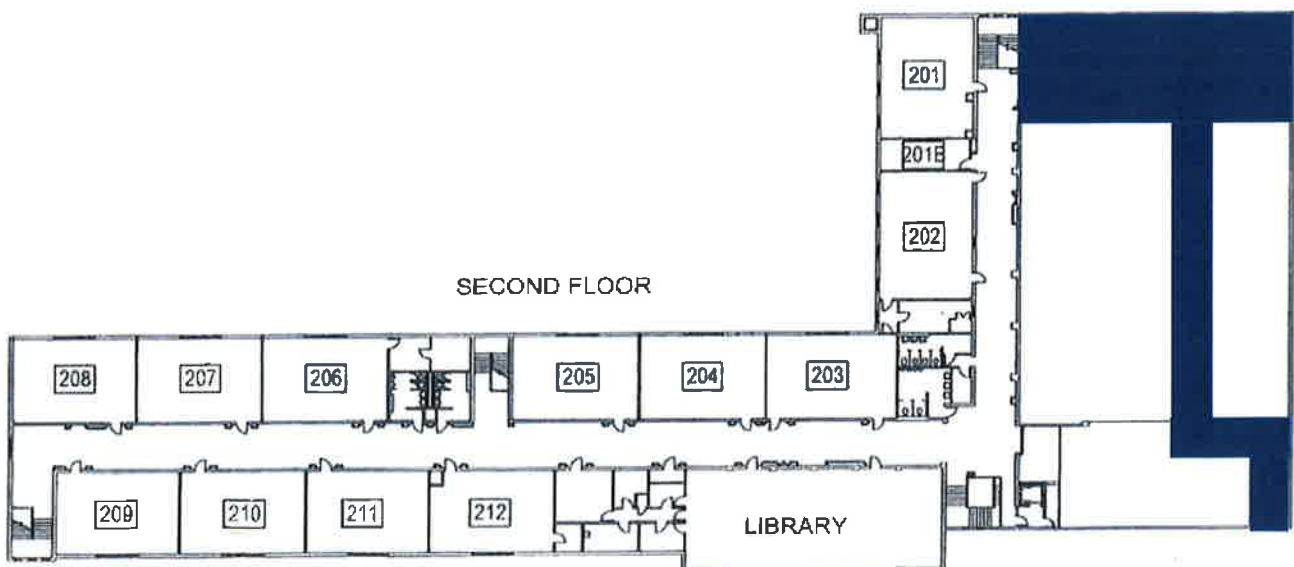
Entry to Tunnels



Entry to Tunnels



SECOND FLOOR



Attachment D

Lead Based Paint Limited Assessment Report

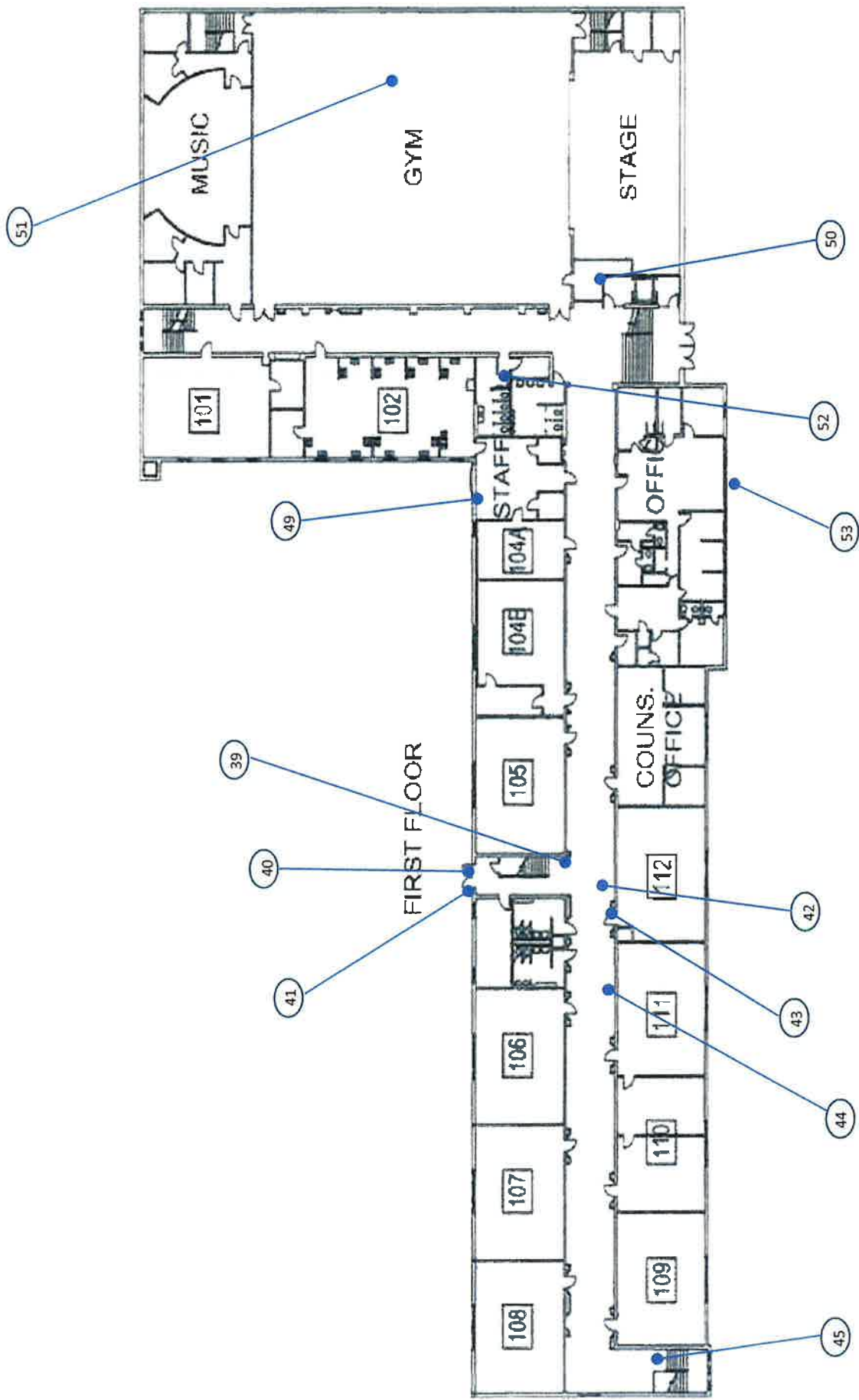
Index	Room	Side	Component	Substrate	Color	Condition	PbC
25			Calibration		White		0
26			Calibration		White		0
27			Calibration		White		0
28			Calibration		Red		1.1
29			Calibration		Red		1.1
30			Calibration		Red		1.2
31	Shop Rm/Shop Bldg	W	Wall	Wood	White		0.11
32	Office	N	Wall	Plaster	White		0.25
33	Class Rm	W	Wall	Plaster	White		0.02
34	Class Rm	W	Door	Wood	White		0.01
35	Ext Wall	N	Wall	Wood	White		1.3
36	Ext. CMU	N	Wall	CMU	Cream		0
37	Int-CMU	W	Wall	CMU	Cream		0
38	Hallway	N	Door	Metal	Brown		0
39	Int School	S	Wall	Ceramic Tile	Beige		0
40	Int School	S	Door	Metal	Brown		0
41	Int School	S	D. F	Metal	Brown		0
42	Int School H'W	N	Wall	Plaster	Brown		0.05
43	Int School	N	Door	Wood	Varnish		0
44	Int School	N	Locker #194	Metal	Purple		0
45	Int School	N	Stairwell	Conc.	Brown		0
46	2nd Floor	W	Wall	Plaster	Beige		0.14
47	2nd Floor H'W	E	Wall	Plaster	Beige		0
48	2nd Floor H'W	E	Wall	Ceramic Tile	Beige		1.3
49	1st Floor Facility Rm	S	Vent Heater	Metal	Beige		0.02
50	1st Floor Gym Storage	S	Wall	GWb	White		0
51	Gym Gloor	Floor	Gym Floor	Wood	Varnish		0
52	Bathroom	W	Wall	Ceramic Tile	White		1.2
53	Ext Wall	N	Wall	Conc.	Beige		0

54			Calibratio		White		0
55			Calibration		White		0
56			Calibration		White		0
57			Calibration		Red		1.2
58			Calibration		Red		1
59			Calibration		Red		1

HUNTINGTON MIDDLE SCHOOL

XRF LEAD Shot Locations

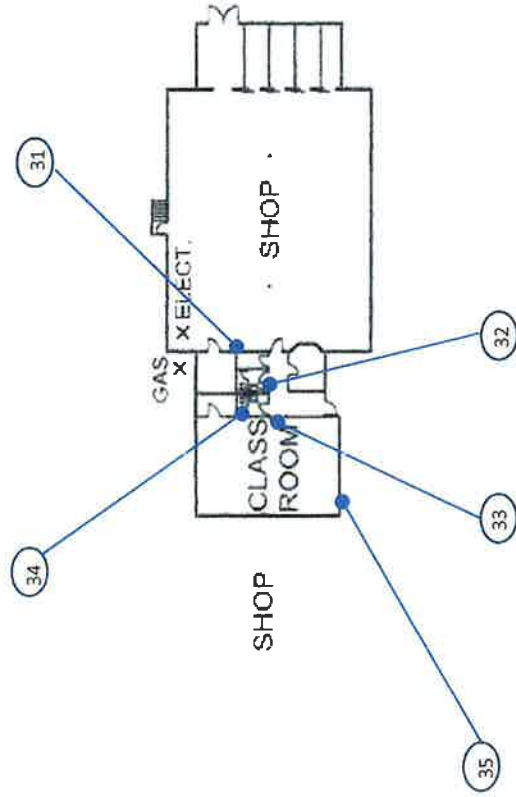
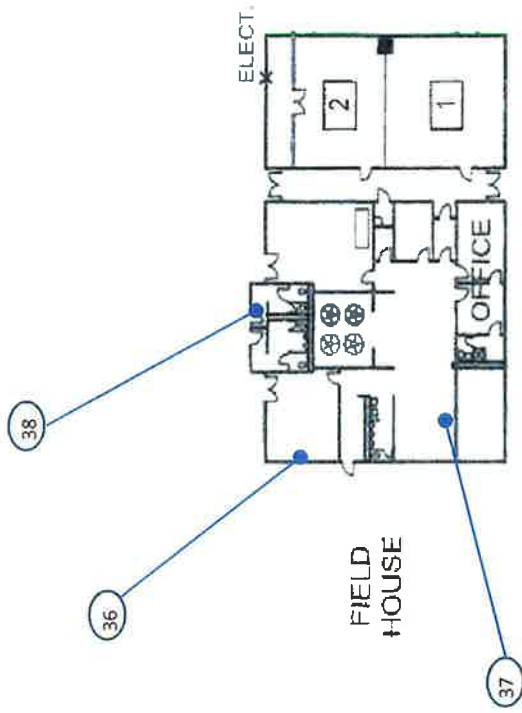
First Floor



CUNTINGTON MIDDLE SCHOOL

XRF LEAD Shot Locations

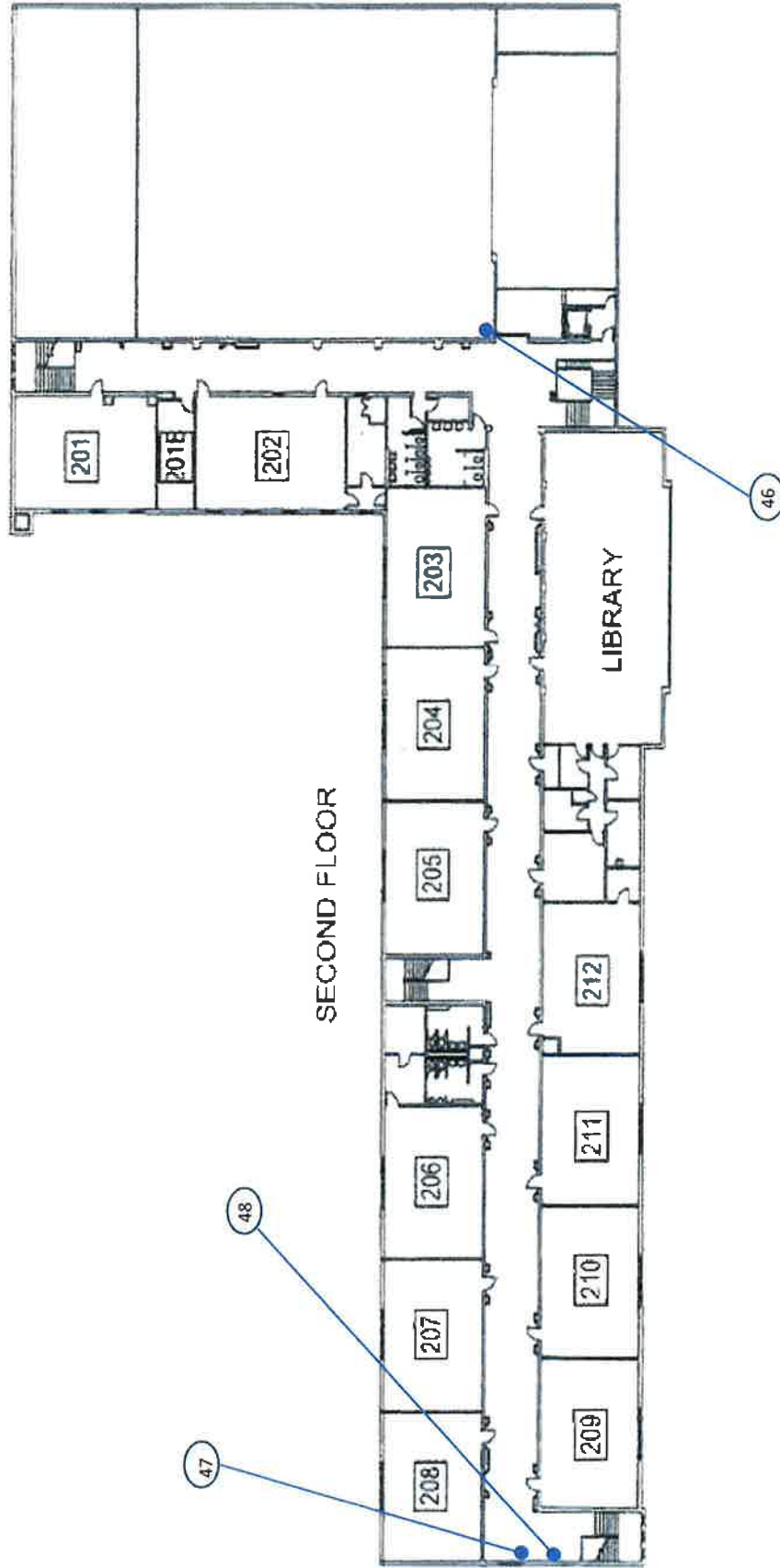
Field House & Shop



CUNTINGTON MIDDLE SCHOOL

XRF LEAD Shot Locations

Second Floor



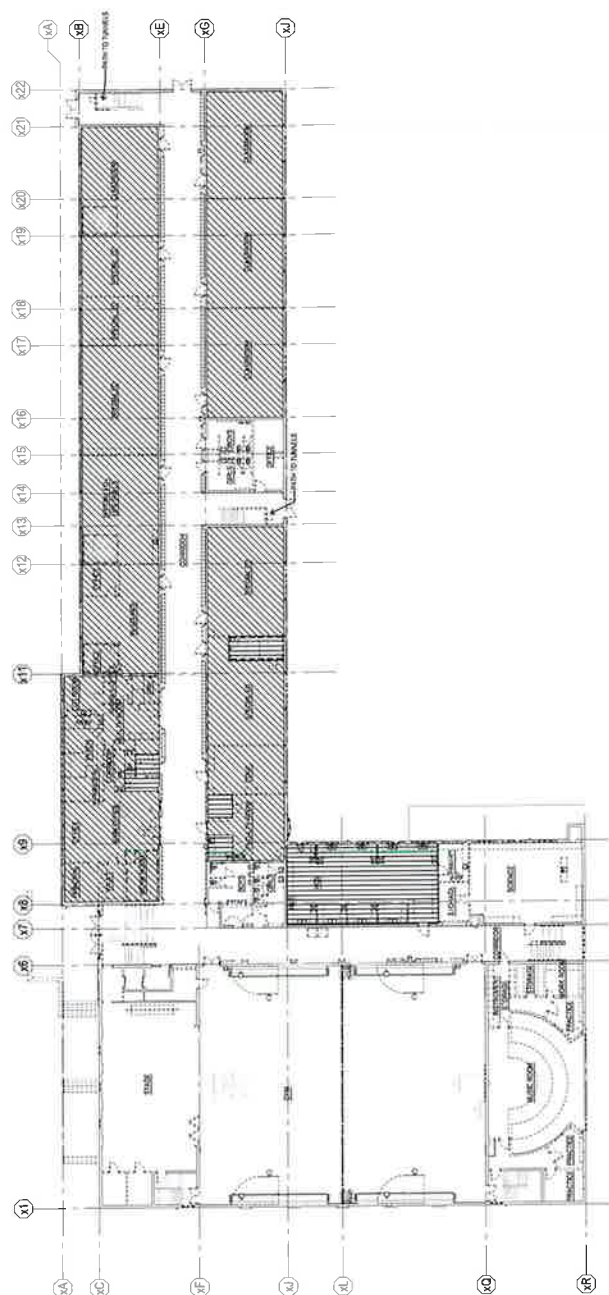
Date:	07/26/2021
Job No.:	21808.00
Drawn By:	NON-E
Cracked by:	DR
Hardness	
Date	Description

LEVEL 1-
OVERALL PLAN
HAZMAT

H101



PROGRESS SET

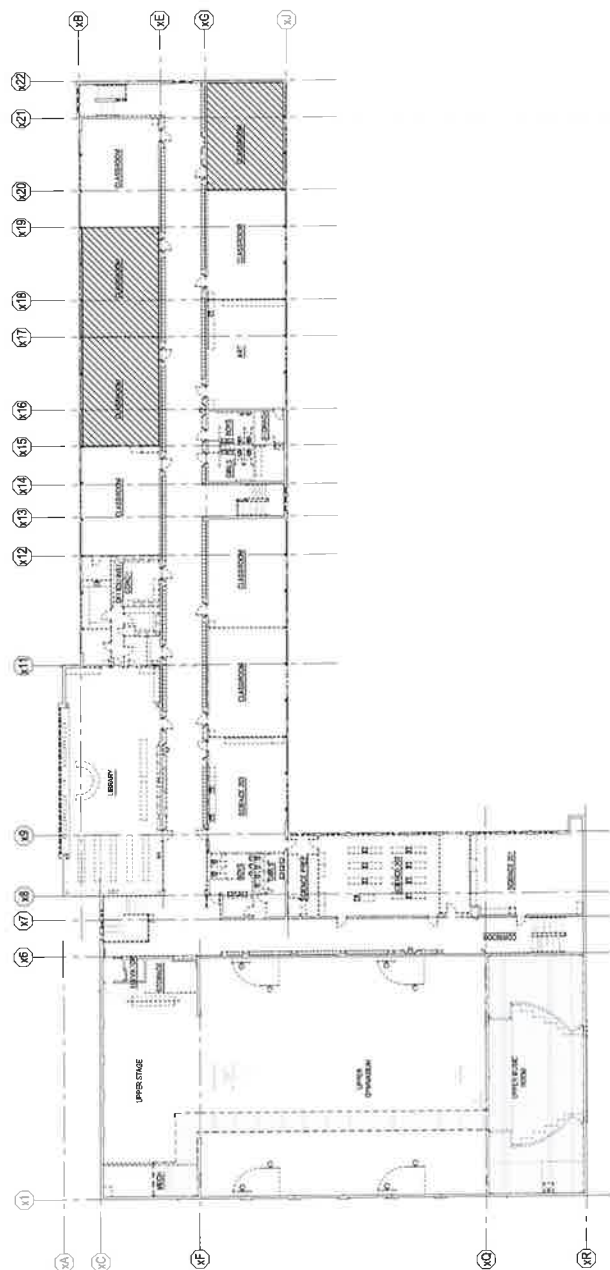


LEVEL 1 - HAZARDOUS MATERIAL DEMO/ABATEMENT FLOOR PLAN





PROGRESS SET



LEVEL 2 - HAZARDOUS MATERIAL DEMO / ABATEMENT FLOOR PLAN



Attachment E

AHERA

BUILDING INSPECTOR REFRESHER CERTIFICATE

This is to certify that

Dennis Rauschenberg

has attended and satisfactorily completed all requirements to
maintain accreditation as an AHERA Building Inspector in
accordance with the Toxic Substance Control
Act Title (Section 206) and 40 CFR 763.

Accreditation No. BI/R-NES-01082021-09

Course Date: Jan 08, 2021

Valid through: Jan 08, 2022



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Lead-Based Paint Program

Michael C. McKay

Risk Assessor

Cert #6512

Expires 01/30/2022



Department of Commerce

Innovation is in our nature.

Geotechnical Engineering Report

Huntington Middle School Renovation and Gymnasium Addition
500 Redpath Street
Kelso, Washington

Prepared for:
Kelso School District
601 Crawford Street
Kelso, Washington 98626

July 7, 2020
PBS Project 73400.004



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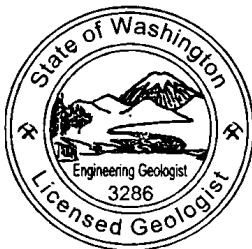
Geotechnical Engineering Report

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Prepared by:



Exp. 7/1/2021

Shaun E. Cordes

Shaun Cordes, LG, LEG
Project Engineering Geologist



7/6/2020

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Figure 2. Site Plan

Figure 3. Tectonic Setting of the Pacific Northwest

Figure 4. Geologic Map

Figure 5. Liquefaction Susceptibility Map

Figure 6. Regional Fault Map

Figure 7. Historical Seismicity

APPENDICES

Appendix A: Field Explorations

Table A-1. Terminology Used to Describe Soil

Table A-2. Key to Test Pit and Boring Log Symbols

Figures A1–A7. Logs for Borings B-1 through B-7

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Figure A10. Shear Wave Velocity Profile

Appendix B: Laboratory Testing

Figure B1. Atterberg Limits Test Results

Figure B2. Summary of Laboratory Data

1 INTRODUCTION

1.1 General

This report presents results of PBS Engineering and Environmental Inc. (PBS) geotechnical engineering services for the proposed Huntington Middle School renovations and gymnasium addition located at 500 Redpath Street in Kelso, Washington (site). The general site location is shown on the Vicinity Map, Figure 1. The locations of PBS' explorations in relation to existing site features are shown on the Site Plan, Figure 2.

1.2 Purpose and Scope

The purpose of PBS' services was to develop geotechnical design and construction recommendations in support of the planned renovations and gymnasium addition. This was accomplished by performing the following scope of services.

1.2.1 Literature and Records Review

PBS reviewed various published geologic maps of the area for information regarding geologic conditions and hazards at or near the site. PBS also reviewed previously completed reports for the project site and vicinity.

1.2.2 Subsurface Explorations

Seven borings were advanced to depths between 26.5 to 61.5 feet below the existing ground surface (bgs). The borings were logged and representative soil samples collected by a member of the PBS geotechnical engineering staff. In addition, two cone penetration tests (CPTs) were advanced to depths of approximately 29 and 59 feet bgs. The interpreted boring logs are presented as Figures A1 through A7 and the CPT logs are presented as Figures A8 and A9 in Appendix A, Field Explorations. Shear wave velocities collected in CPT-1 are presented as Figure A10. The approximate boring and CPT locations are shown on the Site Plan, Figure 2.

1.2.3 Soils Testing

Soil samples were returned to our laboratory and classified in general accordance with the Unified Soil Classification System (ASTM D2487) and/or the Visual-Manual Procedure (ASTM D2488). Laboratory tests included natural moisture contents, grain-size analyses, and Atterberg limits. Laboratory test results are included in the exploration logs in Appendix A, Field Explorations; and in Appendix B, Laboratory Testing.

1.2.4 Geotechnical Engineering Analysis

Data collected during the subsurface exploration, literature research, and testing were used to develop site-specific geotechnical design parameters and construction recommendations.

1.2.5 Report Preparation

This Geotechnical Engineering Report summarizes the results of our explorations, testing, and analyses, including information relating to the following:

- Field exploration logs and site plan showing approximate exploration locations
- Laboratory test results
- Groundwater considerations
- Liquefaction potential
- Seismic site hazard study that includes:
 - Discussion of geologic and seismic hazards impacting the site
 - Location of nearby faults
 - Evaluation of liquefaction potential
- Discussion of soil improvement options

- Discussion of foundation alternatives
- Shallow foundation design recommendations:
 - Minimum embedment
 - Allowable bearing pressure
 - Estimated settlement (total and differential)
 - Sliding coefficient
- Deep foundation options (if needed)
- Lateral earth pressures for embedded/retaining wall design, including:
 - Active, passive, and at-rest earth pressures
 - Seismic lateral force
 - Sliding coefficient
 - Groundwater and drainage considerations
- Earthwork and grading, cut, and fill recommendations:
 - Structural fill materials and preparation, and reuse of on-site soils
 - Wet weather considerations
 - Utility trench excavation and backfill requirements
 - Temporary and permanent slope inclinations
- Seismic design criteria in accordance with the 2018 International Building Code (IBC) with State of Washington amendments
- Slab subgrade preparation recommendations

1.3 Project Understanding

PBS understands that the Kelso School District intends renovate the existing academic structures at Huntington Middle School and construct a new 5,500-square-foot gymnasium along the northwest side of the existing academic building, adjacent to the parking lot and bus lane.

2 SITE CONDITIONS

2.1 Surface Description

The site is located near the terminus of the Cowlitz River valley and is positioned east of the Cowlitz River, downslope and adjacent to Interstate 5. The school is bordered immediately to the west by North Kelso Avenue, to the south by densely vegetated slope and upslope residential properties, to the east by a densely vegetated slope and upslope Interstate 5, and to the north by North Kelso Avenue and an upslope residential property.

The school is composed of a primary academic building, oriented east to west, with two permanent structures located south of the primary academic structure, and a modular structure to the east. A track-and-field area is located south of the academic buildings and a large open grass field is located to the north. A staff parking lot is situated between the academic structures, and additional parking and bus drive lanes are located to the west at the front of the school.

Review of available LiDAR data indicates the site is surrounded by slopes to the north, east, and south that give rise to a higher terrace surface (WADNR, 2020). The academic structures are positioned on a higher surface that we interpret as a fluvial terrace associated with deposition by the Cowlitz River. The site slopes down from an elevation of approximately 37 feet above mean sea level (amsl) at the east end of the site where the

modular structure is located, to elevations ranging from 17 to 21 feet along the west side of the academic buildings (NAVD88; WADNR, 2020). The contours on Figure 2 provide a coherent outline of this higher surface, with definitive slope break along the south, east, and north sides of the campus.

2.2 Geologic Setting

The site is located at the northern extent of the Portland Basin, a tectonic depression within the physiographic province of the Puget-Willamette Lowland (PWL). The PWL separates the Cascade Range from the Washington coastal range (Willapa Hills and Olympic Mountains) and extends from the Puget Sound to Eugene, Oregon (Yeats et al., 1996). At this location, the Portland Basin and PWL terminate against the geologic provinces of the Willapa Hills to the northwest and the South Cascades to the north and northeast.

The PWL is situated along the Cascadia Subduction Zone (CSZ) where oceanic rocks of the Juan de Fuca Plate are subducting beneath the North American Plate, resulting in deformation and uplift of the coast range and volcanism in the Cascade Range (Figure 3). Active northwest-trending faults accommodating clockwise rotation of the North American Plate are found throughout the Puget-Willamette lowland (Brocher et al., 2017; USGS, 2020). Older inactive faults and folds are found throughout the entire region, juxtaposing bedrock units, including the nearby Columbia Hills Anticline and Kelso fault (Figure 4).

2.2.1 Local Geology

The site is mapped as underlain by recent (Holocene) alluvium consisting of sand, gravel, silt, and peat. These sediments were deposited by the Cowlitz River and overlie older deformed sedimentary and volcanic rocks of Pliocene to Eocene age (Livingston, 1966; Figure 4). Pleistocene age river terraces positioned along the periphery of the Cowlitz River valley form flat surfaces higher in elevation than the Holocene alluvium. The rocks comprising the surrounding hillsides are deformed by northwest-trending anticline and syncline folds. Southeast of the site, the Cowlitz River valley is structurally bounded by the inactive north-south trending Kelso fault.

2.3 Subsurface Conditions

The site was explored by drilling seven borings, designated B-1 through B-7, to depths of 26.5 to 61.5 feet bgs. The drilling was performed by Holt Services, Inc., of Vancouver, Washington, using a track-mounted Mobile B-57 drill rig and mud rotary drilling techniques. Two additional cone penetration tests (CPTs) were completed to depths of approximately 29 and 59 feet bgs by Oregon Geotechnical Explorations using a track-mounted Geoprobe Model 6622 CPT rig.

PBS has summarized the subsurface units as follows:

SOFT SEDIMENTS (ML, CL, CH, SP-SM, SP, GP):	Interbedded fluvial sediments were encountered in borings B-1, B-2, B-4, B-5, and B-6 from the ground surface to the termination depth. In boring B-6, these soft sediments persisted to approximately 23 feet bgs before older terrace sediments were encountered. Fine-grained materials varied from low plasticity silts to high plasticity clays. Coarse-grained materials ranged in composition from poorly graded sand with silt to poorly graded gravel. Fine-grained materials were very soft to very stiff, with SPT N-values between 0 and 23 blows to advance the sampler 12 inches, were olive gray to brown in color, moist to wet, exhibited low to high plasticity, and contained fine-grained sand. Coarse-grained materials were very loose to dense, with SPT N-values between 0 and 37, primarily gray, moist to wet, with fine- to medium-grained sand, non-plastic fines, and included subrounded gravels at depth.
CONSOLIDATED SEDIMENTS (ML, CL, CH, SP-SM, SM):	Older terrace sediments were encountered in borings B-3 and B-7 from the ground surface to approximately 30 feet bgs. These materials were primarily coarse-grained sediments with lesser constituents of fine-grained materials. Materials varied from poorly graded sand with silt to silty sand. Materials were loose to medium dense with SPT N-values between 8 and 23, primarily brown in color, moist to wet, fine- to medium-grained sand, and contained low plasticity fines. With increasing depth, fine-grained materials were encountered at approximately 15 feet bgs. These materials are described as very stiff lean and fat clays with SPT N-values between 11 and 20, ranged in color from olive brown to greenish gray, were moist to wet, exhibited medium to high plasticity, and contained fine-grained sand and fine to coarse subrounded gravels.
WEATHERED BEDROCK (RX):	Weathered bedrock was encountered in boring B-3 at approximately 28 feet bgs. The material was weak, grayish green, friable, and platy. The material could be textured into sandy silt that was hard, with corresponding SPT N-values of greater than 50 blows required to advance the sampler 6 inches, exhibited low plasticity, and contained fine-grained sand.

The materials encountered within our borings were consistent with geologic mapping of the area. We note that B-3 and B-7, encountered more consolidated materials, beginning at the ground surface and throughout the entire borings, than the other borings. Softer materials were encountered from the ground surface to depths greater than 20 feet in other parts of the site.

2.4 Groundwater

Static groundwater was not directly measured in our borings due to the mud-rotary drilling techniques used. Pore pressure dissipation testing in CPT-1 indicates groundwater may be present at a depth of approximately 7 feet bgs at that location. Based on a review of regional groundwater logs available from the Washington State Department of Ecology, we anticipate that the static groundwater level is present at a depth of less than 10 feet bgs (WSDE, 2020). Please note that groundwater levels can fluctuate during the year depending on climate, irrigation season, extended periods of precipitation, drought, and other factors.

3 GEOLOGIC HAZARDS

Geologic and seismic hazards are defined as conditions associated with the geologic and seismic environment that could influence existing and/or proposed improvements. Geologic and seismic hazards that could affect the site's development are identified below and should be considered during the planning process.

3.1 Seismicity and Faulting

3.1.1 Seismic Sources

Several types of seismic sources exist in the Pacific Northwest, which are outlined below. Volcanic sources beneath the Cascade Range are not considered further in this study, as they rarely exceed about $M=5.0$ in size and are not considered to pose a significant ground-shaking hazard to the project site.

3.1.1.1 Cascadia Subduction Zone (CSZ) – Interface Earthquakes

The CSZ represents the boundary between the subducting Juan de Fuca tectonic plate and the overriding North American tectonic plate (Figure 3). Recurrence intervals for subduction zone earthquakes are based on studies of the geologic record, with studies estimating a recurrence interval between 500 to 530 years (Goldfinger et. al, 2012). Geologic evidence and written records from Japan suggest the most recent earthquake occurred in January 1700. The 1700 earthquake probably ruptured much of the approximate 620-mile (1,000 km) length of the CSZ and was estimated at moment magnitudes of M_w 9.0. The horizontal distance from the edge of the CSZ megathrust is located approximately 130 miles (210 km) from Kelso, Washington. The current US Geological Survey risk-based maximum credible earthquake for CSZ megathrust is M_w 9.0 ± 0.2 (USGS, 2008).

3.1.1.2 Intraslab Earthquakes

Intraslab earthquakes occur within the subducting slab. They are problematic in the sense that they do not have a surface expression or rupture the ground surface and their seismicity generates deformation along many faults within the slab (Kirby et al., 2002). The CSZ has generated significant intraslab destructive earthquakes including the 2001 M_w 6.8 Nisqually earthquake in the Puget lowland. The estimated depth to the subducting Juan de Fuca plate under Kelso is approximately 40 km (Blair et al., 2011). Therefore, intraslab earthquakes are a seismic hazard that must be considered.

3.1.1.3 Crustal Earthquakes and Faults

Review of the US Geological Survey Quaternary Fault and Fold Database (USGS, 2006) indicate the site is not within close proximity (less than 25 km) to Quaternary faults (Figure 6). We note that the Kelso Fault is mapped as crossing the site (Figure 4); however, this fault is not considered active.

3.1.1.4 Historical Seismicity

Regional historical seismicity information was acquired from the Advanced National Seismic System (ANSS) Comprehensive Catalog, hosted by the Northern California Earthquake Data Center (NCEDC), and is presented on Figure 7. These data include earthquakes with magnitudes exceeding M 2.5, within a 150-km radius of the city of Kelso, Washington, and recorded between 1963 and 2017 (NCEDC, 2017). Magnitudes within the ANSS dataset are recorded as local magnitude, surface-wave magnitude, body-wave magnitude, moment magnitude, and magnitude of completeness.

3.2 Landslides

Landslides occur when masses of soil or rock lose stability due to over-saturation of the material, contributing to elevated pore water pressures; erosion of the terminal end of the slope, causing de-buttressing and generating additional instability of the overburden material; along geologic contacts; or as a combination of these processes in conjunction with one another. Seismically induced landslides may also occur during seismic events relating to the liquefaction of the soils in question or due to additional seismic loading. During such events, material may tumble, slide, or flow along the slide planes within the slope, along geologic contacts, or may protrude out of the exiting ground surface.

Based on a review of the WADNR Geologic Information Portals Landslide Catalog, the hills east of the site and upslope of Interstate 5 have numerous mapped landslides within the "Landslide Compilations" layer (WADNR,

2020b). In addition, a mapped landslide within the "Landslide Compilations" layer is located along the south side of the track at the toe of the terrace. This landslide deposit is distinguishable in WADNR LiDAR (WADNR, 2020a).

We note that the eastern upslope portion of the site has an appearance of a potential landslide deposit with several benches and several definitive slope breaks. This slope is not currently mapped as a landslide, and we cannot definitively say at this time if it is a landslide, or if it poses a hazard to downslope structures. Many unmapped, active, and inactive slides exist throughout the Pacific Northwest, and this may be one. Alternatively, this may be an erosional feature from incision of the prehistoric Cowlitz River. This slope has potential for instability due to seismic loading of a code-based seismic event.

3.2.1 Other Seismic Hazards

Other site-specific seismic hazards considered include fault rupture, seiche and tsunami inundation, liquefaction and lateral spreading, and earthquake shaking. Based on the location of the site's distance from any known Quaternary faults, the risk of fault rupture at the site is low. Due to the lack of free water bodies in the area and distance from the Pacific Ocean, the risk of seiche waves and tsunami inundation is absent. Based on the materials encountered during our explorations, and review of liquefaction susceptibility maps in the area, the risk of liquefaction at the site is moderate to high (WADNR, 2019b; Figure 5). Strong earthquake ground shaking will occur during a code-based seismic event on the CSZ as well as from local faults. Based on our current project understanding, our opinion is that effects of earthquake ground motions can be accounted for by using code-based design procedures and the code-based design response spectrum.

3.3 100-Year and 500-Year Floods

The site is located approximately 2,000 feet from the Cowlitz River, which is impounded by a levee system that provides flood protection (FEMA, 2015). Review of the FEMA Flood Insurance Map indicates the site is not expected to be impacted by a 100-year flood event (1% probability of flooding annually) or a 500-year flood event (0.2% probability of flooding annually) unless breaching or undermining of the levee system occurs.

3.4 Liquefaction and Lateral Spreading

Liquefaction is defined as a decrease in the shear resistance of loose, saturated, cohesionless soil (e.g., sand) or low plasticity silt soils, due to the buildup of excess pore pressures generated during an earthquake. This results in a temporary transformation of the soil deposit into a viscous fluid. Liquefaction can result in ground settlement, foundation bearing capacity failure, and lateral spreading of ground.

Based on review of the liquefaction susceptibility map for Cowlitz County (Palmer et al., 2004; Figure 5), the site is shown as having moderate to high liquefaction hazard. The results of our analyses indicate approximately 5 inches of liquefaction settlement may occur following a code-based earthquake.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Geotechnical Design Considerations

Soils encountered within the area of the proposed addition were generally very soft/loose. Borings B-3 and B-7 encountered stiffer/denser soils with higher relative SPT N-values. Our interpretation is that stiffer/denser, consolidated materials are more abundant along the east side of the campus between the modular building and staff parking lot. These materials are favorable for shallow foundations, without the need for soil improvement, as opposed to the materials encountered at the proposed gymnasium location, along the northwest side of the academic building, or the garden area to the southeast.

The proposed gymnasium location and garden area are underlain by zones of very loose to medium dense sand and silty sand that are susceptible to liquefaction resulting from a code-based earthquake. Conventional foundation support on shallow spread footings is not feasible at either location without some form of mitigation and consideration of earthquake risk.

4.2 Seismic Design Considerations

4.2.1 Code-Based Seismic Design Parameters

The current seismic design criteria for this project are based on the 2018 IBC. Due to the potential for liquefaction of site soils, the site should be considered Site Class F. However, in accordance with ASCE 7-16, for structures having a fundamental period of less than 0.5 second, a site-response analysis is not required to determine the spectral accelerations of liquefied soils and seismic design parameters can be determined using the pre-liquefaction site class, Site Class D. If the period of the structure is greater than 0.5 second, seismic site response analyses will be required. The seismic design criteria, in accordance with the 2018 IBC, are summarized in Table 1.

Table 1. 2018 IBC Seismic Design Parameters

Parameter	Short Period	1 Second
Maximum Credible Earthquake Spectral Acceleration	$S_S = 0.90$	$S_1 = 0.43$
Site Class	D*	
Site Coefficient	$F_a = 1.14$	$F_v = 1.87^{**}$
Adjusted Spectral Acceleration	$S_{MS} = 1.02$	$S_{M1} = ***$
Design Spectral Response Acceleration Parameters	$S_{DS} = 0.68$	$S_{D1} = ***$
MCE _G Peak Ground Acceleration	PGA = 0.41 g	
Site Amplification Factor at PGA	$F_{PGA} = 1.19$	
Site Modified Peak Ground Acceleration	PGA _M = 0.49 g	

g = Acceleration due to gravity

* Site Class D can be used if the fundamental period of the new structure is less than 0.5 second. If the period of the structure is greater than 0.5 second, seismic site response analyses will be required.

** This value of F_v should only be used for the calculation of T_S

*** Structures on Site Class D sites with S_1 greater than or equal to 0.2, provided the value of the seismic response coefficient C_S is determined by Eq. (12.8-2) for values of $T \leq 1.5T_S$ and taken as equal to 1.5 times the value computed in accordance with either Eq. (12.8-3) for $T_L \geq T > 1.5T_S$ or Eq. (12.8-4) for $T > T_L$.

4.3 Foundation Alternatives

The soils at the proposed gymnasium location present a challenge for support of the proposed facility during a code-based earthquake. The site is underlain by very loose to medium dense, granular soils that are susceptible to liquefaction and compressible silt soils that are susceptible to consolidation settlement. The presence of soft, compressible and liquefaction-susceptible soils and the associated potential of seismically induced liquefaction settlement would affect footings, mats, and slabs.

Despite the challenges of supporting foundations on the shallow soils at the site, the underlying deeper soils, below depths of 30 to 60 feet, would likely provide suitable support for deep foundations. We have developed two different foundation alternatives, which are discussed in the following paragraphs.

- Mitigate compressible and potentially liquefiable soils with soil improvement (stone columns/ modified aggregate piers or deep soil mixing [DSM]), used in conjunction with shallow spread footings with grade beams or a mat foundation.
- Use deep foundations.

The use of isolated shallow spread footings without soil improvement is not considered feasible due to potential for liquefaction and consolidation settlement and the associated differential settlement expected during a code-based earthquake. Foundations supported on piles or soils that have been improved can be used to support the proposed buildings; however, each has different levels of damage risk.

4.4 Soil Improvement

Due to the potential for liquefaction, soil improvement may be considered to adequately support structure foundations during a code-based earthquake. The detailed design for soil improvement, such as stone columns or DMS, are typically completed by a design-build contractor. Stone columns would provide suitable static support but would not provide adequate resistance to liquefaction in fine-grained silt soils. DSM can be used to provide both improved static support of new foundations and mitigate the effects of liquefaction.

Depending on the settlement limitations of the new structures, it may not be necessary to improve all the potentially liquefiable soils at the site. The risk of surface manifestation of liquefaction can be reduced by a non-liquefiable layer at the surface (i.e. "crust"). Using the estimated ground surface acceleration associated with a design-level earthquake, methods developed by Ishihara (1985), and the liquefiable layer thickness at the site, the crust would need to be on the order of 30 feet thick. The current crust thickness is on the order of 6- to 8-feet-thick. Using soil improvement techniques to increase the thickness of the crust would allow for the use of shallow spread footings. Because improving the crust does not improve the potentially liquefiable layers at greater depths, liquefaction settlement below the improved soil would probably still occur.

4.4.1 Stone Columns

Installation of stone columns is a common method to mitigate liquefaction. Stone columns incorporate a vibratory probe that is advanced to the target depth, with the void created filled with compacted crushed rock as the probe is extracted, creating a series of stone columns. Advancing the probe as it vibrates can densify loose cohesionless sand, while the replacement with crushed rock acts to improve soft, fine-grained soils that cannot be densified due to their fine-grained nature by reinforcing them with better materials. Stone columns also provide a path for faster dissipation of excess pore water pressures during earthquake events, further reducing liquefaction potential.

Depending on the application, stone columns can be 2 to 3 feet in diameter and installed in a grid at about 6 to 10 feet on-center. The actual diameter and spacing is typically determined by a specialty subcontractor, with the design reviewed by the project geotechnical engineer. We recommend stone columns extend to depths of at least 40 feet bgs or deeper. The extent beyond the intended area of improvement should be approximately one-third the depth of improvement. This would correspond to approximately 25 feet beyond the edge of footings. Stone columns can be used in conjunction with appropriately designed building foundation systems, including spread footings and mats

Due to the presence of fine-grained soils at the site, use of stone columns or vibro-compaction may be less effective than other techniques.

4.4.2 Deep Soil Mixing

As an alternative to the stone columns, a method of mixing cement into the subsurface soils may be used to form columns or walls of cement-amended soils. Using this methodology, either dry or wet cement is injected into the ground with a series of paddles/blades. The paddles rotate during installation creating a generally uniform column of cement-amended soil, which provides greatly increased allowable bearing pressures. The building loads are then supported on shallow foundations resting on the amended soil. In addition, if the columns are installed in an overlapping or touching linear array, the line of columns provides significant shear resistance to lateral soil loads. Often, the linear arrays are arranged in a box pattern forming a series of boxes, or cells, across the site. Experience has shown that the native soil retained in the box pattern has a reduced risk of liquefaction.

Soil mixing would incorporate 2- to 3-foot diameter columns installed in an overlapping pattern having a compressive strength of about 200 pounds per square inch (psi). Treatment area ratios can range from 10 to 30 percent or more.

4.5 Shallow Footings or Mats on Improved Soil

Shallow spread footings bearing on native soil that has been improved with stone columns or DSM may be used to support loads associated with the proposed development. Stone columns can be used to reinforce soft non-plastic silt or loose granular soils to both mitigate liquefaction and provide improved bearing capacities for static (non-seismic) conditions. This technique involves advancing a vibratory probe to the target depth, then placing aggregate through the tip of the probe in lifts that are compacted by raising and lowering the probe. Depending on the spacing and diameter of the densified columns, soil types, and the depth and types of treatment, allowable bearing pressures of 2,500 to 5,000 pounds per square foot (psf) can be achieved beneath the spread footings. The actual diameter and spacing is typically determined by a specialty subcontractor, with the design reviewed by the project geotechnical engineer. Diameters typically range from about 24 to 36 inches, spaced about 6 to 8 feet on-center. Based on subsurface conditions encountered at the site, soil improvement would need to extend to depths of 30 to 50 feet bgs.

4.5.1 Minimum Footing Widths/Design Bearing Pressure

Continuous wall and spread footings should be at least 18 and 24 inches wide, respectively. The design allowable bearing pressure will be determined based on the size and spacing of stone columns, but will not likely be less than 2,500 psf. The recommended allowable bearing pressure applies to the total of dead plus long-term live loads. For footings supported on soil improved with stone columns, allowable bearing pressures may be increased by one-third for seismic and wind.

Footings will settle in response to column and wall loads. Based on our evaluation of the subsurface conditions and our analysis, we estimate post-construction settlement will be less than 1 inch for the column and perimeter foundation loads. Differential settlement will be on the order of one-half of the total settlement. The magnitude of seismic settlement will be a function of the soil improvement design and method.

4.5.2 Footing Embedment Depths

PBS recommends that all footings be founded a minimum of 18 inches below the lowest adjacent grade. The footings should be founded below an imaginary line projecting upward at a 1H:1V (horizontal to vertical) slope from the base of any adjacent, parallel utility trenches or deeper excavations.

4.5.3 Footing Preparation

Excavations for footings should be carefully prepared to a neat and undisturbed state. A representative from PBS should confirm suitable bearing conditions and evaluate all exposed footing subgrades. Observations

should also confirm that loose or soft materials have been removed from new footing excavations and concrete slab-on-grade areas. Localized deepening of footing excavations may be required to penetrate loose, wet, or deleterious materials.

PBS recommends a layer of compacted, crushed rock be placed over the footing subgrades to help protect them from disturbance due to foot traffic and the elements. The footing subgrade should be in a dense or stiff condition prior to pouring concrete. Based on our experience, approximately 4 inches of compacted crushed rock will be suitable beneath the footings.

4.5.4 Lateral Resistance

Lateral loads can be resisted by passive earth pressure on the sides of footings and grade beams, and by friction at the base of the footings. A passive earth pressure of 250 pounds per cubic foot (pcf) may be used for footings confined by native soils and new structural fills. The allowable passive pressure has been reduced by a factor of two to account for the large amount of deformation required to mobilize full passive resistance. Adjacent floor slabs, pavements, or the upper 12-inch depth of adjacent unpaved areas should not be considered when calculating passive resistance. For footings supported on native soils or new structural fills, use a coefficient of friction equal to 0.35 when calculating resistance to sliding. These values do not include a factor of safety (FS).

4.5.5 Grade Beams

Grade beams, or seismic ties, are not intended to vertically support column footings, but to help hold the building structure together during a code-based earthquake to provide for life safety. Grade beams between footings should be designed in accordance with the requirements of section 1810.3.12 of the 2018 IBC.

4.6 Deep Foundations

The impacts from post-earthquake settlement can be reduced by supporting the new building on piles. Piles would penetrate through the potentially liquefiable soils and derive their support from the underlying non-liquefiable soils present to depths of approximately 30 to 60 feet bgs. We recommend that pile foundations for the proposed facilities, if used, consist of driven displacement piles such as closed-end steel pipe piles. Supporting the building on piles will provide support for the structure during an earthquake but will not provide vertical support to at-grade slabs (unless specifically designed and supported on piles).

Advantages of pile foundations include:

- No significant static or seismically induced foundation settlement
- Uses locally available equipment and experienced local contractors

Disadvantages of pile foundations include:

- Differential settlement between pile-supported facilities and utilities or non-pile supported structures
- Requires specialty construction equipment and an experienced specialty contractor

If pile foundations are used, additional specific design recommendations for pile foundations will be necessary, depending the type and size of piles selected. This could include additional exploration to estimate the required length of piles and consideration of lateral capacities that might control pile design.

4.7 Floor Slabs

If site soils are improved, satisfactory subgrade support for building floor slabs can be obtained from the silt and sand subgrade prepared in accordance with our recommendations presented in the Site Preparation,

Wet/Freezing Weather and Wet Soil Conditions, and Imported Granular Materials sections of this report. If the new structure is supported on piles, and the slab is not designed to be pile-supported, settlement, damage, and repair or replacement of the slab should be anticipated following a code-based earthquake.

A minimum 6-inch-thick layer of imported granular material should be placed and compacted over the prepared subgrade. Depending on the design of the stone columns, it may be necessary to provide a 12- to 24-inch-thick working surface, which would help distribute foundation and slab loads. Imported granular material should be composed of crushed rock or crushed gravel that is relatively well graded between coarse and fine, contains no deleterious materials, has a maximum particle size of 1½ inch, and has less than 5 percent by dry weight passing the US Standard No. 200 Sieve.

Floor slabs supported on an improved subgrade and base course prepared in accordance with the preceding recommendations may be designed using a modulus of subgrade reaction (k) of 150 pounds per cubic inch (pci). Alternatively, if the slab is designed to be supported on unimproved soil, it should be designed using a modulus of subgrade reaction (k) of 100 pci.

4.8 Ground Moisture

4.8.1 General

The perimeter ground surface and hardscape should be sloped to drain away from all structures and away from adjacent slopes. Gutters should be tight-lined to a suitable discharge and maintained as free-flowing.

4.8.2 Perimeter Footing Drains

Due to the relatively low permeability of site soils and the potential for perched groundwater at the site, we recommend perimeter foundation drains be installed around all proposed structures.

The foundation subdrainage system should include a minimum 4-inch diameter perforated pipe in a drain rock envelope. A non-woven geotextile filter fabric, such as Mirafi 140N or equivalent, should be used to completely wrap the drain rock envelope, separating it from the native soil and footing backfill materials. The invert of the perimeter drain lines should be placed approximately at the bottom of footing elevation. Also, the subdrainage system should be sealed at the ground surface. The perforated subdrainage pipe should be laid to drain by gravity into a non-perforated solid pipe and finally connected to the site drainage stem at a suitable location. Water from downspouts and surface water should be independently collected and routed to a storm sewer or other positive outlet. This water must not be allowed to enter the bearing soils.

4.8.3 Vapor Flow Retarder

A continuous, impervious barrier must be installed over the ground surface in crawl spaces and under slabs of all structures. Barriers should be installed per the manufacturer's recommendations.

5 CONSTRUCTION RECOMMENDATIONS

5.1 Site Preparation

Construction of the proposed addition will involve clearing and grubbing of the existing vegetation or demolition of possible existing structures. Demolition should include removal of existing pavement, utilities, etc., throughout the proposed new development. Underground utility lines or other abandoned structural elements should also be removed. The voids resulting from removal of foundations or loose soil in utility lines should be backfilled with compacted structural fill. The base of these excavations should be excavated to firm native subgrade before filling, with sides sloped at a minimum of 1H:1V to allow for uniform compaction. Materials generated during demolition should be transported off site or stockpiled in areas designated by the owner's representative.

5.1.1 Proofrolling/Subgrade Verification

Following site preparation and prior to placing aggregate base over shallow foundation, floor slab, and pavement subgrades, the exposed subgrade should be evaluated either by proofrolling or another method of subgrade verification. The subgrade should be proofrolled with a fully loaded dump truck or similar heavy, rubber-tire construction equipment to identify unsuitable areas. If evaluation of the subgrades occurs during wet conditions, or if proofrolling the subgrades will result in disturbance, they should be evaluated by PBS using a steel foundation probe. We recommend that PBS be retained to observe the proofrolling and perform the subgrade verifications. Unsuitable areas identified during the field evaluation should be compacted to a firm condition or be excavated and replaced with structural fill.

5.1.2 Wet/Freezing Weather and Wet Soil Conditions

Due to the presence of fine-grained silt and sands in the near-surface materials at the site, construction equipment may have difficulty operating on the near-surface soils when the moisture content of the surface soil is more than a few percentage points above the optimum moisture required for compaction. Soils disturbed during site preparation activities, or unsuitable areas identified during proofrolling or probing, should be removed and replaced with compacted structural fill.

Site earthwork and subgrade preparation should not be completed during freezing conditions, except for mass excavation to the subgrade design elevations. We recommend the earthwork construction at the site be performed during the dry season.

Protection of the subgrade is the responsibility of the contractor. Construction of granular haul roads to the project site entrance may help reduce further damage to the pavement and disturbance of site soils. The actual thickness of haul roads and staging areas should be based on the contractors' approach to site development, and the amount and type of construction traffic. The imported granular material should be placed in one lift over the prepared undisturbed subgrade and compacted using a smooth-drum, non-vibratory roller. A geotextile fabric should be used to separate the subgrade from the imported granular material in areas of repeated construction traffic. Depending on site conditions, the geotextile should meet Washington State Department of Transportation (WSDOT) SS 9-33.2 – Geosynthetic Properties for soil separation or stabilization. The geotextile should be installed in conformance with WSDOT SS 2-12.3 – Construction Geosynthetic (Construction Requirements) and, as applicable, WSDOT SS 2-12.3(2) – Separation or WSDOT SS 2-12.3(3) – Stabilization.

5.2 Excavation

The near-surface soils at the site can be excavated with conventional earthwork equipment. Sloughing and caving should be anticipated. All excavations should be made in accordance with applicable Occupational Safety and Health Administration (OSHA) and state regulations. The contractor is solely responsible for adherence to the OSHA requirements. Trench cuts should stand relatively vertical to a depth of approximately 4 feet bgs, provided no groundwater seepage is present in the trench walls. Open excavation techniques may be used provided the excavation is configured in accordance with the OSHA requirements, groundwater seepage is not present, and with the understanding that some sloughing may occur. Trenches/excavations should be flattened if sloughing occurs or seepage is present. Use of a trench shield or other approved temporary shoring is recommended if vertical walls are desired for cuts deeper than 4 feet bgs. If dewatering is used, we recommend that the type and design of the dewatering system be the responsibility of the contractor, who is in the best position to choose systems that fit the overall plan of operation.

5.3 Structural Fill

The extent of site grading is currently unknown; however, PBS estimates that cuts and fills will be on the order of up to 2 feet to raise the grades within the proposed site. Structural fill should be placed over subgrade that has been prepared in conformance with the Site Preparation and Wet/Freezing Weather and Wet Soil Conditions sections of this report. Structural fill material should consist of relatively well-graded soil, or an approved rock product that is free of organic material and debris, and contains particles not greater than 4 inches nominal dimension.

The suitability of soil for use as compacted structural fill will depend on the gradation and moisture content of the soil when it is placed. As the amount of fines (material finer than the US Standard No. 200 Sieve) increases, soil becomes increasingly sensitive to small changes in moisture content and compaction becomes more difficult to achieve. Soils containing more than about 5 percent fines cannot consistently be compacted to a dense, non-yielding condition when the water content is significantly greater (or significantly less) than optimum.

If fill and excavated material will be placed on slopes steeper than 5H:1V, these must be keyed/benched into the existing slopes and installed in horizontal lifts. Vertical steps between benches should be approximately 2 feet.

5.3.1 On-Site Soil

On-site soils encountered in our explorations are generally suitable for placement as structural fill during dry weather when moisture content can be maintained by air drying and/or addition of water. The fine-grained fraction of the site soils are moisture sensitive, and during wet weather, may become unworkable because of excess moisture content. In order to reduce moisture content, some aerating and drying of fine-grained soils may be required. The material should be placed in lifts with a maximum uncompacted thickness of approximately 8 inches and compacted to at least 92 percent of the maximum dry density, as determined by ASTM D1557 (modified proctor).

5.3.2 Imported Granular Materials

Imported granular material used during periods of wet weather or for haul roads, building pad subgrades, staging areas, etc., should be pit or quarry run rock, crushed rock, or crushed gravel and sand, and should meet the specifications provided in WSDOT SS 9-03.14(2) – Select Borrow. In addition, the imported granular material should be fairly well graded between coarse and fine, and of the fraction passing the US Standard No. 4 Sieve, less than 5 percent by dry weight should pass the US Standard No. 200 Sieve.

Imported granular material should be placed in lifts with a maximum uncompacted thickness of 9 inches and be compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D1557.

5.3.3 Base Aggregate

Base aggregate for floor slabs and beneath pavements should be clean crushed rock or crushed gravel. The base aggregate should contain no deleterious materials, meet specifications provided in WSDOT SS 9-03.9(3) – Crushed Surfacing Base Course, and have less than 5 percent (by dry weight) passing the US Standard No. 200 Sieve. The imported granular material should be placed in one lift and compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1557.

5.3.4 Foundation Base Aggregate

Imported granular material placed at the base of excavations for spread footings, slabs-on-grade, and other below-grade structures should be clean, crushed rock or crushed gravel, and sand that is fairly well graded

between coarse and fine. The granular materials should contain no deleterious materials, have a maximum particle size of 1½ inch, and meet WSDOT SS 9-03.12(1)A – Gravel Backfill for Foundations (Class A). The imported granular material should be placed in one lift and compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D1557.

5.3.5 Trench Backfill

Trench backfill placed beneath, adjacent to, and for at least 2 feet above utility lines (i.e., the pipe zone) should consist of well-graded granular material with a maximum particle size of 1 inch and less than 10 percent by dry weight passing the US Standard No. 200 Sieve, and should meet the standards prescribed by WSDOT SS 9-03.12(3) – Gravel Backfill for Pipe Zone Bedding. The pipe zone backfill should be compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557, or as required by the pipe manufacturer or local building department.

Within pavement areas or beneath building pads, the remainder of the trench backfill should consist of well-graded granular material with a maximum particle size of 1½ inches, less than 10 percent by dry weight passing the US Standard No. 200 Sieve, and should meet standards prescribed by WSDOT SS 9-03.19 – Bank Run Gravel for Trench Backfill. This material should be compacted to at least 92 percent of the maximum dry density, as determined by ASTM D1557, or as required by the pipe manufacturer or local building department. The upper 2 feet of the trench backfill should be compacted to at least 95 percent of the maximum dry density, as determined by ASTM D1557.

Outside of structural improvement areas (e.g., roadway alignments or building pads), trench backfill placed above the pipe zone should consist of excavated material free of wood waste, debris, clods, or rocks greater than 6 inches in diameter and meet WSDOT SS 9-03.14 – Borrow and WSDOT SS 9-03.15 – Native Material for Trench Backfill. This general trench backfill should be compacted to at least 90 percent of the maximum dry density, as determined by ASTM D1557, or as required by the pipe manufacturer or local building department.

5.3.6 Stabilization Material

Stabilization rock should consist of pit or quarry run rock that is well-graded, angular, crushed rock consisting of 4- or 6-inch-minus material with less than 5 percent passing the US Standard No. 4 Sieve. The material should be free of organic matter and other deleterious material. WSDOT SS 9-13.1(5) – Quarry Spalls can be used as a general specification for this material with the stipulation of limiting the maximum size to 6 inches.

6 ADDITIONAL SERVICES AND CONSTRUCTION OBSERVATIONS

At the time of this report was prepared, the size, type, and location of structures and additions had not been finalized. Depending on the location of the structures, additional exploration and analyses may be required. In most cases, other services beyond completion of a final geotechnical engineering report are necessary or desirable to complete the project. Occasionally, conditions or circumstances arise that require additional work that was not anticipated when the geotechnical report was written. PBS offers a range of environmental, geological, geotechnical, and construction services to suit the varying needs of our clients.

PBS should be retained to review the plans and specifications for this project before they are finalized. Such a review allows us to verify that our recommendations and concerns have been adequately addressed in the design.

Satisfactory earthwork performance depends on the quality of construction. Sufficient observation of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. We recommend that PBS be retained to observe general excavation,

stripping, fill placement, footing subgrades, and/or pile installation. Subsurface conditions observed during construction should be compared with those encountered during the subsurface explorations. Recognition of changed conditions requires experience; therefore, qualified personnel should visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those anticipated.

7 LIMITATIONS

This report has been prepared for the exclusive use of the addressee, and their architects and engineers, for aiding in the design and construction of the proposed development and is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced, in total or in part, without express written consent of the client and PBS. It is the addressee's responsibility to provide this report to the appropriate design professionals, building officials, and contractors to ensure correct implementation of the recommendations.

The opinions, comments, and conclusions presented in this report are based upon information derived from our literature review, field explorations, laboratory testing, and engineering analyses. It is possible that soil, rock, or groundwater conditions could vary between or beyond the points explored. If soil, rock, or groundwater conditions are encountered during construction that differ from those described herein, the client is responsible for ensuring that PBS is notified immediately so that we may reevaluate the recommendations of this report.

Unanticipated fill, soil and rock conditions, and seasonal soil moisture and groundwater variations are commonly encountered and cannot be fully determined by merely taking soil samples or completing explorations such as soil borings. Such variations may result in changes to our recommendations and may require additional funds for expenses to attain a properly constructed project; therefore, we recommend a contingency fund to accommodate such potential extra costs.

The scope of work for this subsurface exploration and geotechnical report did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.

If there is a substantial lapse of time between the submission of this report and the start of work at the site, if conditions have changed due to natural causes or construction operations at or adjacent to the site, or if the basic project scheme is significantly modified from that assumed, this report should be reviewed to determine the applicability of the conclusions and recommendations presented herein. Land use, site conditions (both on and off site), or other factors may change over time and could materially affect our findings; therefore, this report should not be relied upon after three years from its issue, or in the event that the site conditions change.

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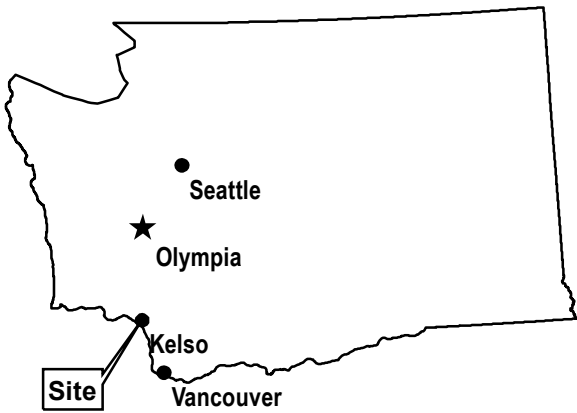
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Figures



VICINITY MAP

HUNTINGTON MIDDLE SCHOOL KELSO, WASHINGTON

DATE: JULY 2020 · PROJECT: 73400.004







FIGURE

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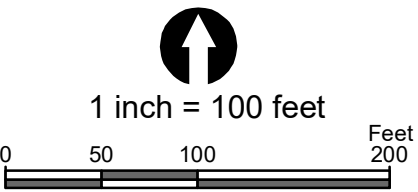
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EXPLANATION

-  B-1 - Boring name and approximate location
-  CPT-1 - CPT name and approximate location
-  5-foot elevation contour
-  Proposed Gymnasium location

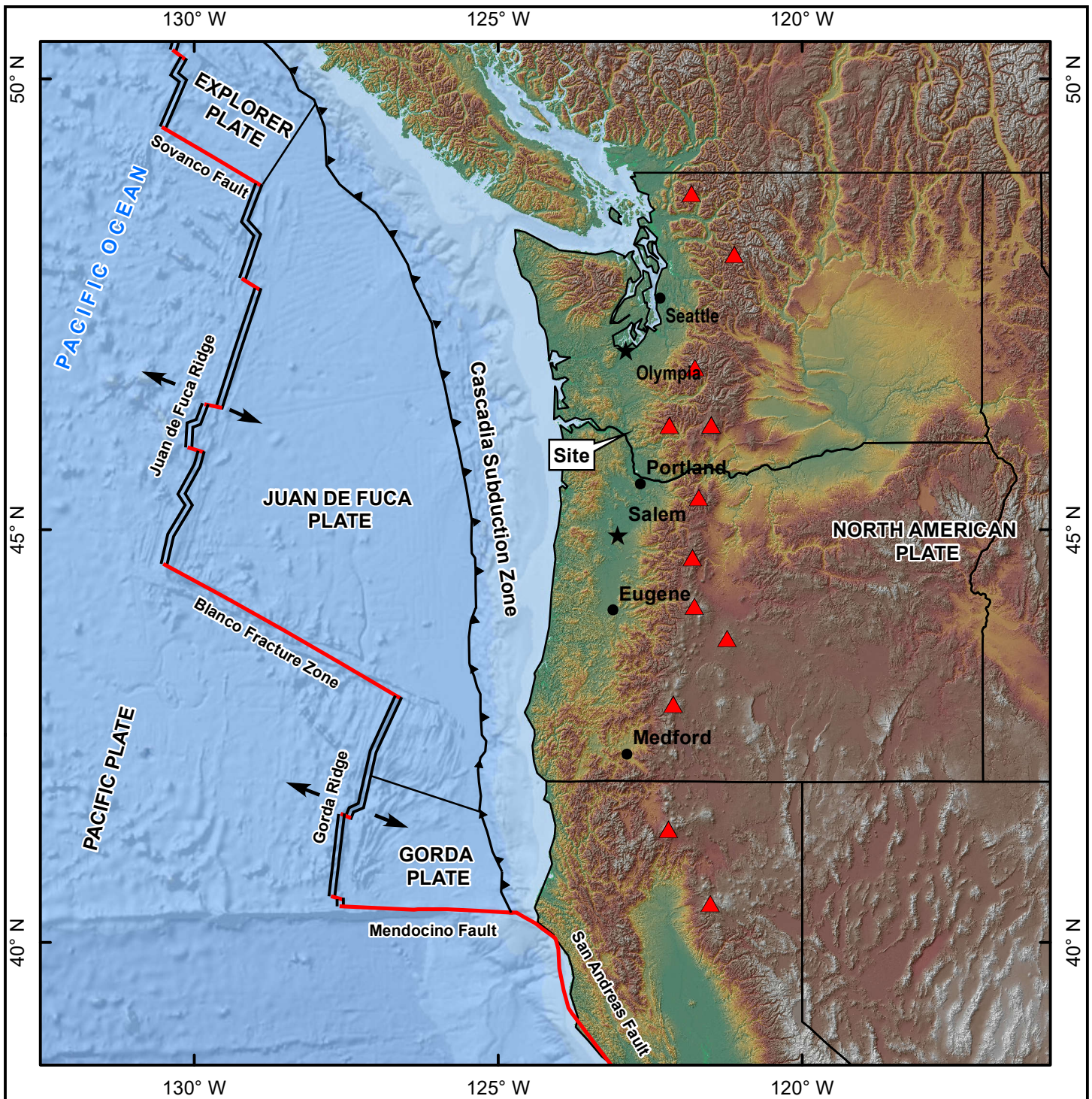
SOURCES: WADNR LiDAR (2020) and Google Earth (2018)



SITE PLAN
HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

DATE: JULY 2020 · PROJECT: 73400.004





EXPLANATION

- ▲ Volcano
- Transform boundary
- = Spreading ridge
- ▲ Thrust fault

Sources:

- 1) SRTM 30-meter DEM
- 2) ESRI World Oceans Basemap
- 3) USGS Tectonic Plate Boundaries

TECTONIC SETTING OF THE PACIFIC NORTHWEST

HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

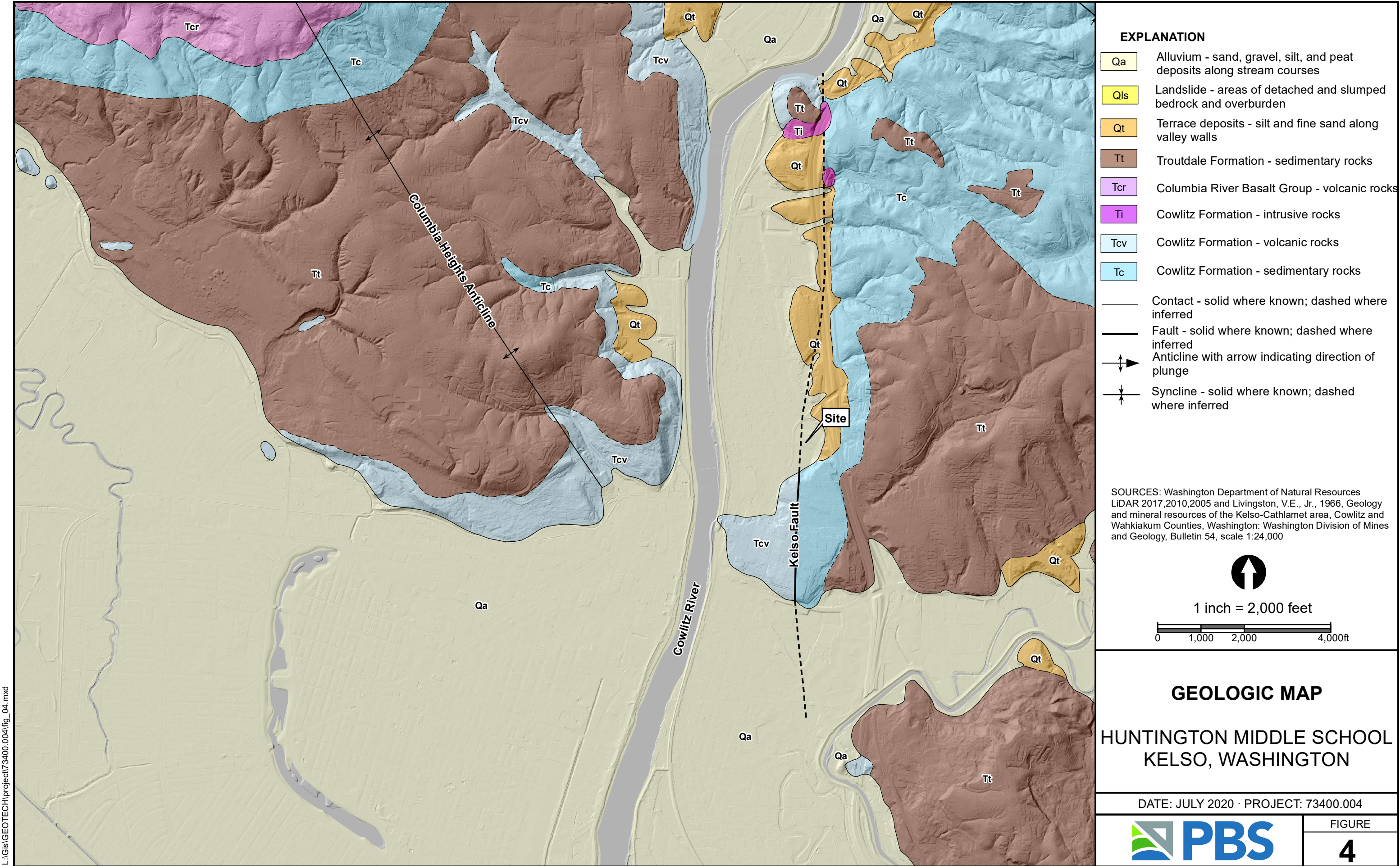
DATE: JULY 2020 · PROJECT: 73400.004

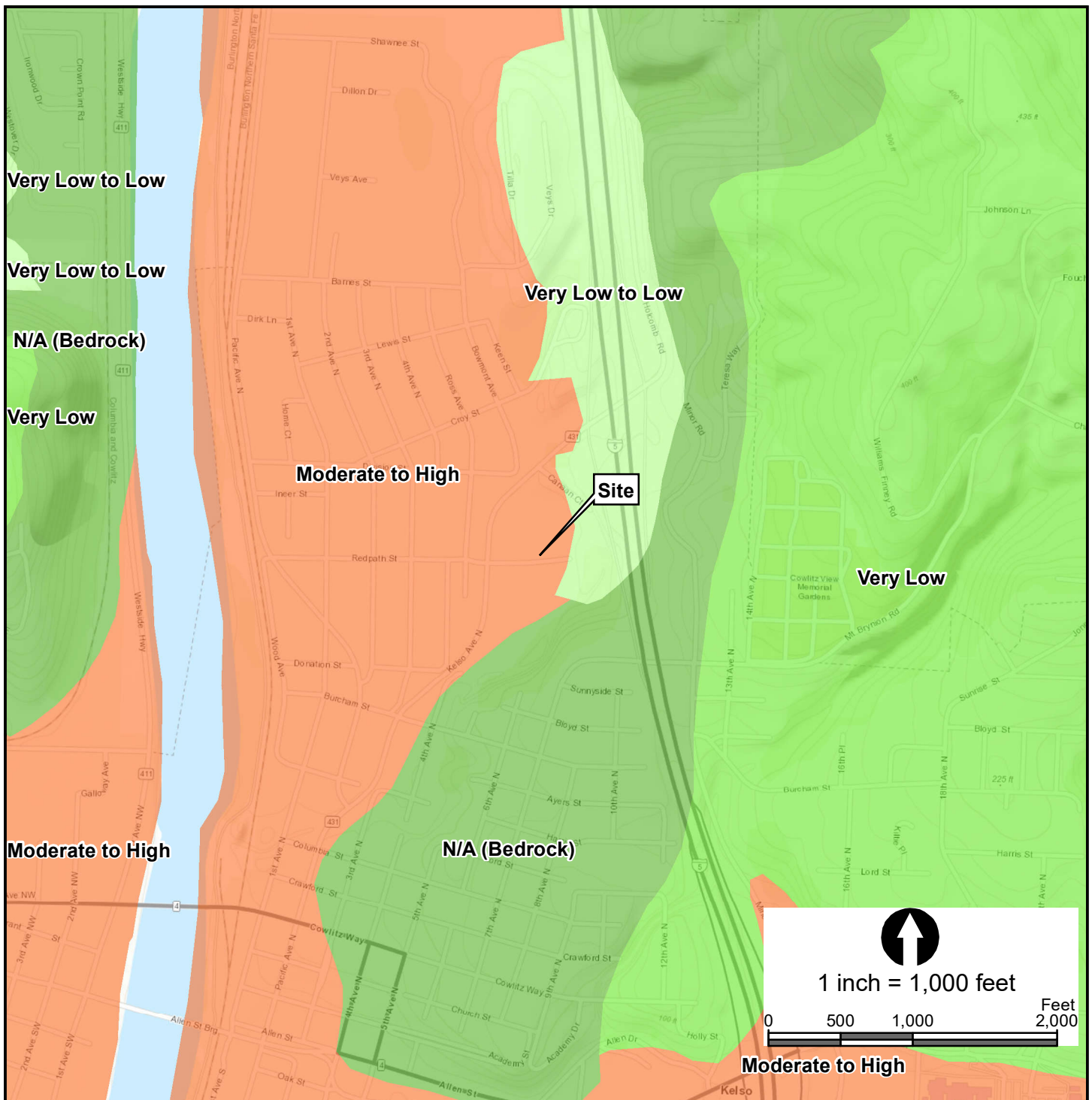


FIGURE

3

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EXPLANATION

- Liquefaction susceptibility: Moderate to high
- Liquefaction susceptibility: Very low to low
- Liquefaction susceptibility: Very low
- Liquefaction susceptibility: Bedrock

SOURCES: Liquefaction Susceptibility Map of Cowlitz County, Washington by Palmer et al. (2004), ESRI Topographic Basemap

LIQUEFACTION SUSCEPTIBILITY MAP

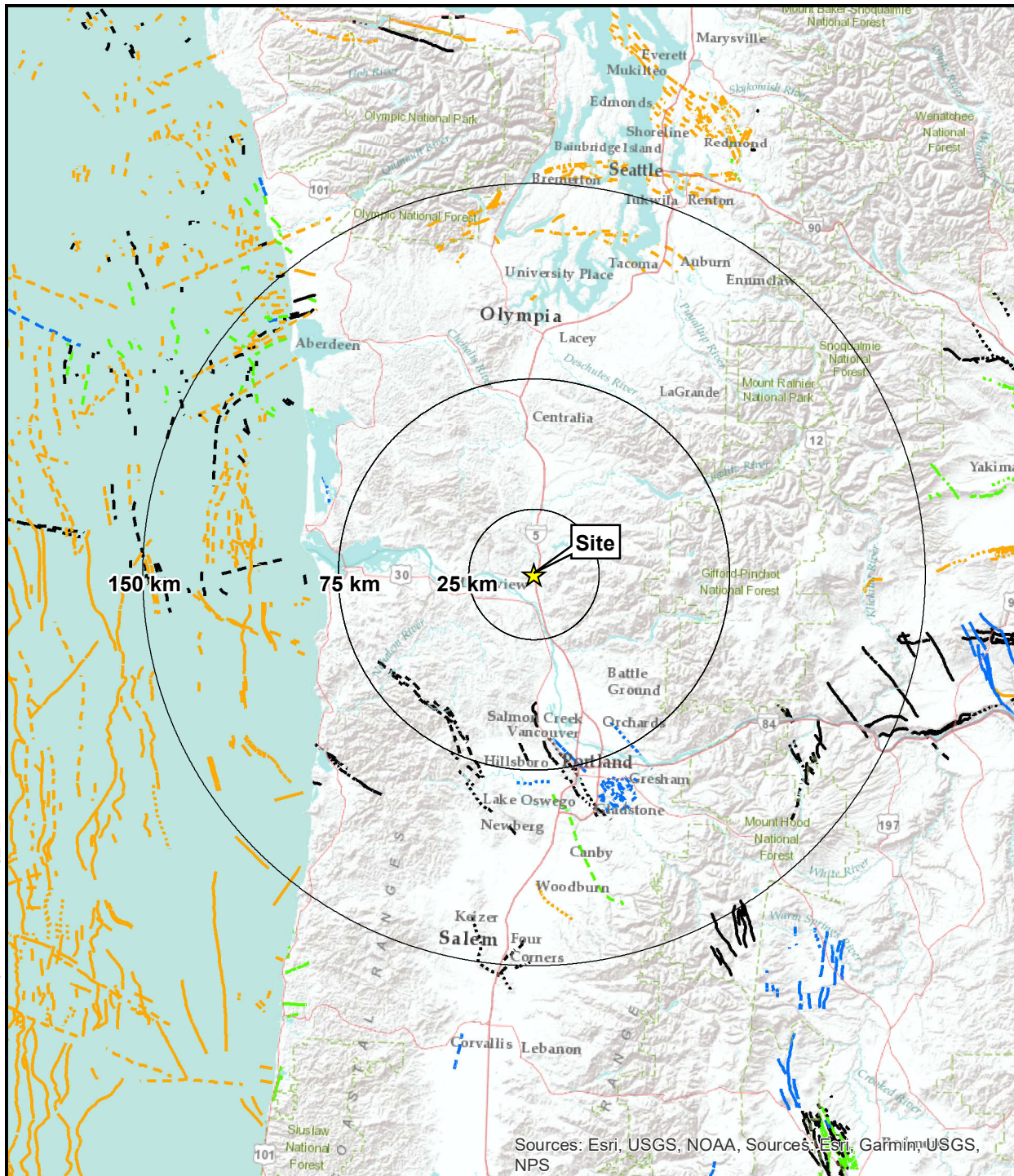
HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

DATE: JULY 2020 · PROJECT: 0073400.004



FIGURE

5



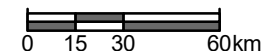
EXPLANATION

USGS (2006) Quaternary fault traces; solid where well constrained, dashed where moderately constrained, and dotted where inferred

- · — · — · — < 15,000 years - latest Quaternary
- · — · — · — < 130,000 years - late Quaternary
- · — · — · — < 750,000 years - middle and late Quaternary
- · — · — · — < 1.6 million years - undifferentiated Quaternary



1 inch = 60 kilometers



REGIONAL FAULT MAP

HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

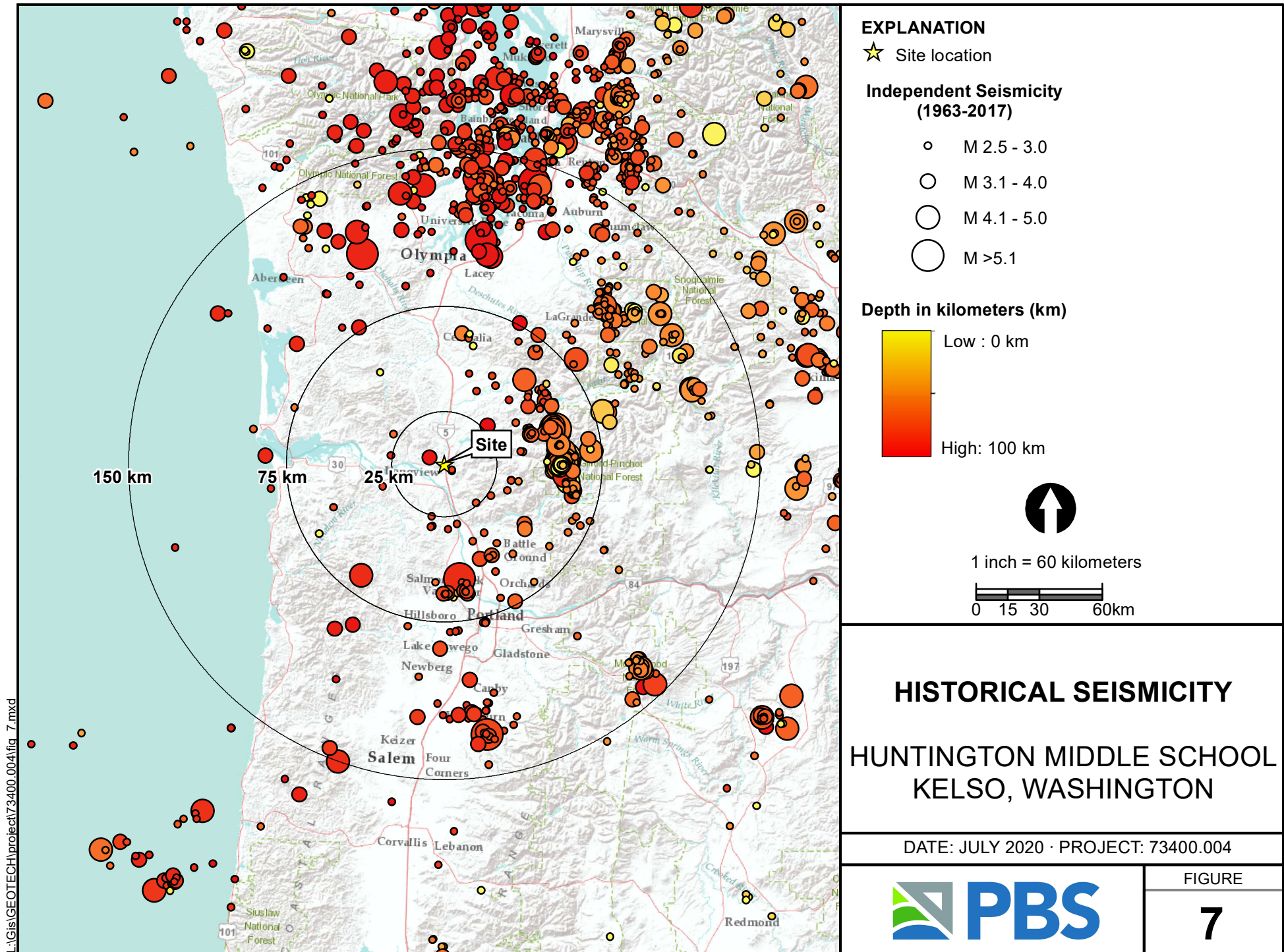
DATE: JULY 2020 · PROJECT: 73400.004



FIGURE

6

Sources: Esri, USGS, NOAA, Sources: Esri, Garmin, USGS, NPS



Appendix A

Field Explorations

Appendix A: Field Explorations

A1 GENERAL

PBS explored subsurface conditions at the project site by advancing seven drilled borings and two cone penetration test (CPT) probes. The drilled borings were advanced to depths of 26.5 to 61.5 feet bgs on March 4, 5, and 24, 2020. The CPTs were completed to depths of approximately 29 to 59 feet bgs on February 28, 2020. The approximate locations of the explorations are shown on Figure 2, Site Plan. The procedures used to advance the borings, collect samples, and other field techniques are described in detail in the following paragraphs. Unless otherwise noted, all soil sampling and classification procedures followed engineering practices in general accordance with relevant ASTM procedures. "General accordance" means that certain local drilling/excavation and descriptive practices and methodologies have been followed.

A2 BORINGS

A2.1 Drilling

Borings were advanced using a track-mounted Mobile B-57 drill rig provided and operated by Holt Services, Inc., of Vancouver, Washington, using mud-rotary drilling techniques. The borings were observed by a member of the PBS geotechnical staff, who maintained a detailed log of the subsurface conditions and materials encountered during the course of the work.

A2.2 Sampling

Disturbed soil samples were taken in the borings at selected depth intervals. The samples were obtained using a standard 2-inch outside diameter, split-spoon sampler following procedures prescribed for the standard penetration test (SPT). Using the SPT, the sampler is driven 18 inches into the soil using a 140-pound hammer dropped 30 inches. The number of blows required to drive the sampler the last 12 inches is defined as the standard penetration resistance (N-value). The N-value provides a measure of the relative density of granular soils such as sands and gravels, and the consistency of cohesive soils such as clays and plastic silts. The disturbed soil samples were examined by a member of the PBS geotechnical staff and then sealed in plastic bags for further examination and physical testing in our laboratory.

A2.3 Boring Logs

The boring logs show the various types of materials that were encountered in the borings and the depths where the materials and/or characteristics of these materials changed, although the changes may be gradual. Where material types and descriptions changed between samples, the contacts were interpreted. The types of samples taken during drilling, along with their sample identification number, are shown to the right of the classification of materials. The N-values and natural water (moisture) contents are shown farther to the right.

A3 CONE PENETRATION TESTS (CPTs)

A3.1 Field Procedures

Explorations CPT-1 and CPT-2 were advanced using a track-mounted Geoprobe Model 6622 CPT rig. CPTs were performed by Oregon Geotechnical Explorations and results were reviewed and used for site specific seismic design calculations.

Before the start of testing, the truck is jacked up and leveled on four pads to provide a stable reaction for the cone thrust. During the test, the instrumented cone is hydraulically pushed into the ground at the rate of about 2 centimeters per second (cm/s), and readings of cone tip resistance, sleeve friction, and pore pressure are digitally recorded every second. As the cone advances, additional cone rods are added such that a "string" of rods continuously advances through the soil. As the test progresses, the CPT operator monitors the cone resistance and its deviation from vertical alignment.

For CPT soundings in which seismic data were collected, conventional CPT testing is temporarily halted at 2-meter intervals to collect seismic data. A seismograph integrated with the CPT is used to record the arrival time of seismic waves generated by striking a steel beam positioned at least 10 feet from the cone rods and coupled to the ground surface by the weight of the beam and operator to prevent the beam from moving when struck.

Each side of the beam is struck several times, and each signal produced by a blow is closely examined for signal and noise content, after which the waveform is selected and the arrival time of the shear wave is determined and recorded. After a complete set of seismic data are recorded, the cone is advanced to the next depth, and the procedure is repeated until the hole is complete.

A3.2 CPT Logs

In accordance with the applicable ASTM standard, the vertical axis is designated for the depth, while the horizontal axis displays the magnitude of the test values recorded. Recorded values include tip and shaft resistance and pore pressure. Final plotting scales are determined after all the tests are completed, and take into consideration maximum test values and depths recorded for the project. This information is used to calculate the friction ratio and is correlated to material types, which are presented graphically in a column to the right. The CPT logs are included as Figures A8 and A9. The results of shear wave velocity testing are included on Figure A10.

A4 MATERIAL DESCRIPTION

Initially, samples were classified visually in the field. Consistency, color, relative moisture, degree of plasticity, and other distinguishing characteristics of the soil samples were noted. Afterward, the samples were reexamined in the PBS laboratory, various standard classification tests were conducted, and the field classifications were modified where necessary. The terminology used in the soil classifications and other modifiers are defined in Table A-1, Terminology Used to Describe Soil.

Soil Descriptions

Soils exist in mixtures with varying proportions of components. The predominant soil, i.e., greater than 50 percent based on total dry weight, is the primary soil type and is capitalized in our log descriptions (SAND, GRAVEL, SILT, or CLAY). Smaller percentages of other constituents in the soil mixture are indicated by use of modifier words in general accordance with the ASTM D2488-06 Visual-Manual Procedure. "General Accordance" means that certain local and common descriptive practices may have been followed. In accordance with ASTM D2488-06, group symbols (such as GP or CH) are applied on the portion of soil passing the 3-inch (75mm) sieve based on visual examination. The following describes the use of soil names and modifying terms used to describe fine- and coarse-grained soils.

Fine-Grained Soils (50% or greater fines passing 0.075 mm, No. 200 sieve)

The primary soil type, i.e., SILT or CLAY is designated through visual-manual procedures to evaluate soil toughness, dilatency, dry strength, and plasticity. The following outlines the terminology used to describe fine-grained soils, and varies from ASTM D2488 terminology in the use of some common terms.

Primary soil NAME, Symbols, and Adjectives			Plasticity Description	Plasticity Index (PI)
SILT (ML & MH)	CLAY (CL & CH)	ORGANIC SOIL (OL & OH)		
SILT		Organic SILT	Non-plastic	0 – 3
SILT		Organic SILT	Low plasticity	4 – 10
SILT/Elastic SILT	Lean CLAY	Organic SILT/ Organic CLAY	Medium Plasticity	10 – 20
Elastic SILT	Lean/Fat CLAY	Organic CLAY	High Plasticity	20 – 40
Elastic SILT	Fat CLAY	Organic CLAY	Very Plastic	>40

Modifying terms describing secondary constituents, estimated to 5 percent increments, are applied as follows:

Description	% Composition	
With Sand	% Sand ≥ % Gravel	15% to 25% plus No. 200
With Gravel	% Sand < % Gravel	
Sandy	% Sand ≥ % Gravel	≤30% to 50% plus No. 200
Gravelly	% Sand < % Gravel	

Borderline Symbols, for example CH/MH, are used when soils are not distinctly in one category or when variable soil units contain more than one soil type. **Dual Symbols**, for example CL-ML, are used when two symbols are required in accordance with ASTM D2488.

Soil Consistency terms are applied to fine-grained, plastic soils (i.e., $PI \geq 7$). Descriptive terms are based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84, as follows. SILT soils with low to non-plastic behavior (i.e., $PI < 7$) may be classified using relative density.

Consistency Term	SPT N-value	Unconfined Compressive Strength	
		tsf	kPa
Very soft	Less than 2	Less than 0.25	Less than 24
Soft	2 – 4	0.25 – 0.5	24 – 48
Medium stiff	5 – 8	0.5 – 1.0	48 – 96
Stiff	9 – 15	1.0 – 2.0	96 – 192
Very stiff	16 – 30	2.0 – 4.0	192 – 383
Hard	Over 30	Over 4.0	Over 383

Soil Descriptions

Coarse - Grained Soils (less than 50% fines)

Coarse-grained soil descriptions, i.e., SAND or GRAVEL, are based on the portion of materials passing a 3-inch (75mm) sieve. Coarse-grained soil group symbols are applied in accordance with ASTM D2488-06 based on the degree of grading, or distribution of grain sizes of the soil. For example, well-graded sand containing a wide range of grain sizes is designated SW; poorly graded gravel, GP, contains high percentages of only certain grain sizes. Terms applied to grain sizes follow.

Material NAME	Particle Diameter	
	Inches	Millimeters
SAND (SW or SP)	0.003 – 0.19	0.075 – 4.8
GRAVEL (GW or GP)	0.19 – 3	4.8 – 75
Additional Constituents:		
Cobble	3 – 12	75 – 300
Boulder	12 – 120	300 – 3050

The primary soil type is capitalized, and the fines content in the soil are described as indicated by the following examples. Percentages are based on estimating amounts of fines, sand, and gravel to the nearest 5 percent. Other soil mixtures will have similar descriptive names.

Example: Coarse-Grained Soil Descriptions with Fines

>5% to < 15% fines (Dual Symbols)	≥15% to < 50% fines
Well graded GRAVEL with silt: GW-GM	Silty GRAVEL: GM
Poorly graded SAND with clay: SP-SC	Silty SAND: SM

Additional descriptive terminology applied to coarse-grained soils follow.

Example: Coarse-Grained Soil Descriptions with Other Coarse-Grained Constituents










Coarse-Grained Soil Containing Secondary Constituents	
With sand or with gravel	≥ 15% sand or gravel
With cobbles; with boulders	Any amount of cobbles or boulders.

Cobble and boulder deposits may include a description of the matrix soils, as defined above.

Relative Density terms are applied to granular, non-plastic soils based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84.

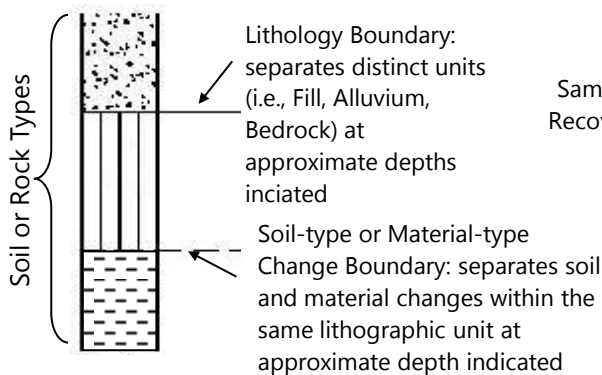
Relative Density Term	SPT N-value
Very loose	0 – 4
Loose	5 – 10
Medium dense	11 – 30
Dense	31 – 50
Very dense	> 50

SAMPLING DESCRIPTIONS

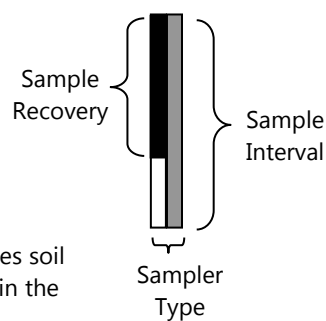
SPT Drive Sampler Standard Penetration Test ASTM D 1586	Shelby Tube Push Sampler ASTM D 1587	Specialized Drive Samplers (Details Noted on Logs)	Specialized Drill or Push Sampler (Details Noted on Logs)	Grab Sample	Rock Coring Interval	Screen (Water or Air Sampling)	Water Level During Drilling/Excavation	Water Level After Drilling/Excavation
								

LOG GRAPHICS

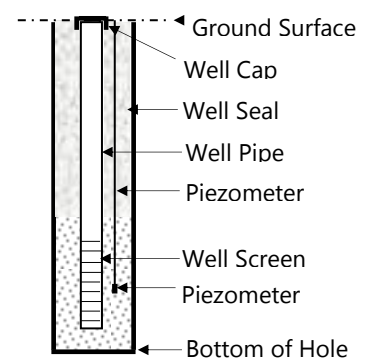
Soil and Rock



Sampling Symbols



Instrumentation Detail



Geotechnical Testing Acronym Explanations

PP	Pocket Penetrometer	HYD	Hydrometer Gradation
TOR	Torvane	SIEV	Sieve Gradation
DCP	Dynamic Cone Penetrometer	DS	Direct Shear
ATT	Atterberg Limits	DD	Dry Density
PL	Plasticity Limit	CBR	California Bearing Ratio
LL	Liquid Limit	RES	Resilient Modulus
PI	Plasticity Index	VS	Vane Shear
P200	Percent Passing US Standard No. 200 Sieve	bgs	Below ground surface
OC	Organic Content	MSL	Mean Sea Level
CON	Consolidation	HCL	Hydrochloric Acid
UC	Unconfined Compressive Strength		

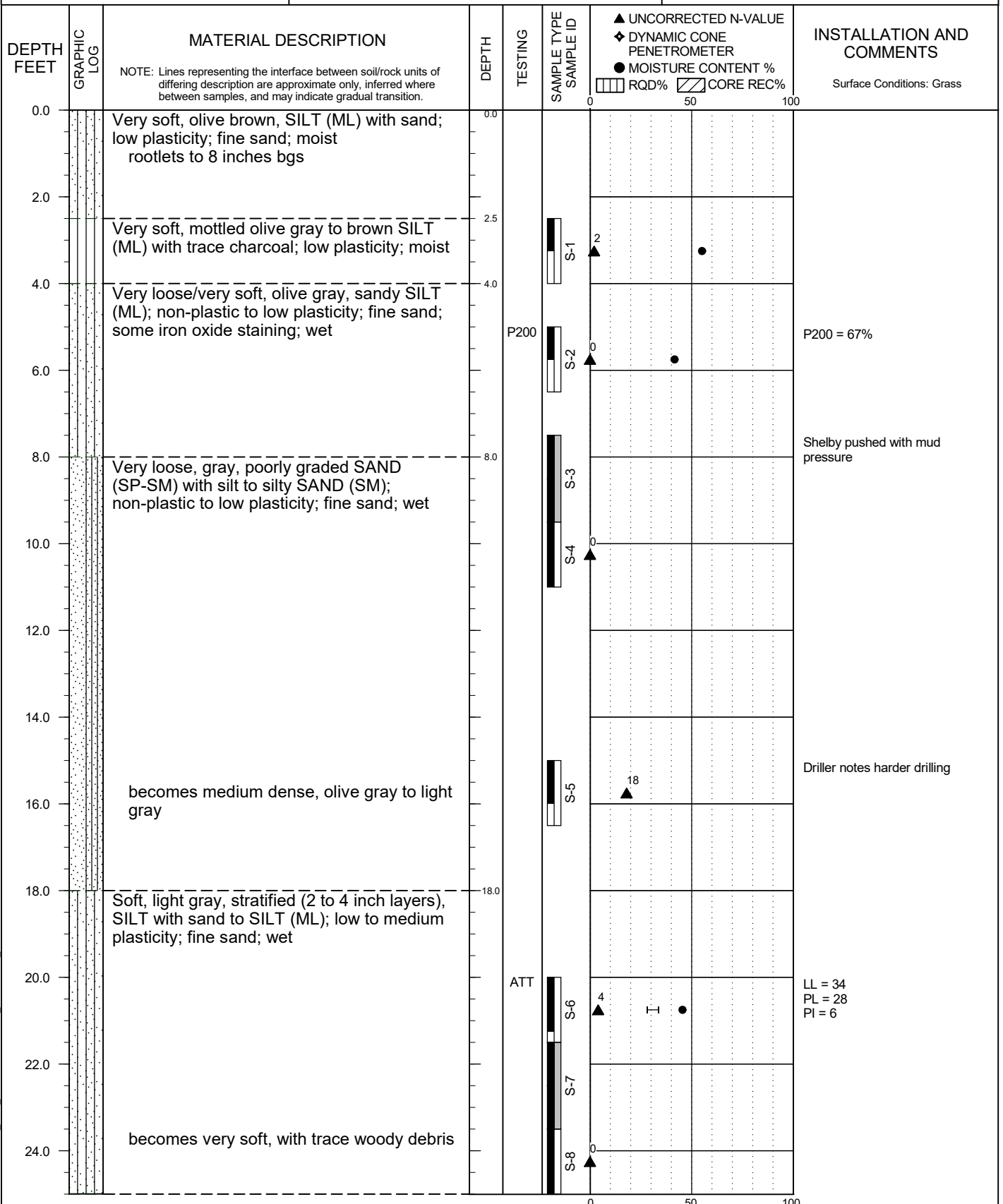


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-1

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-1 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A1
Page 1 of 3

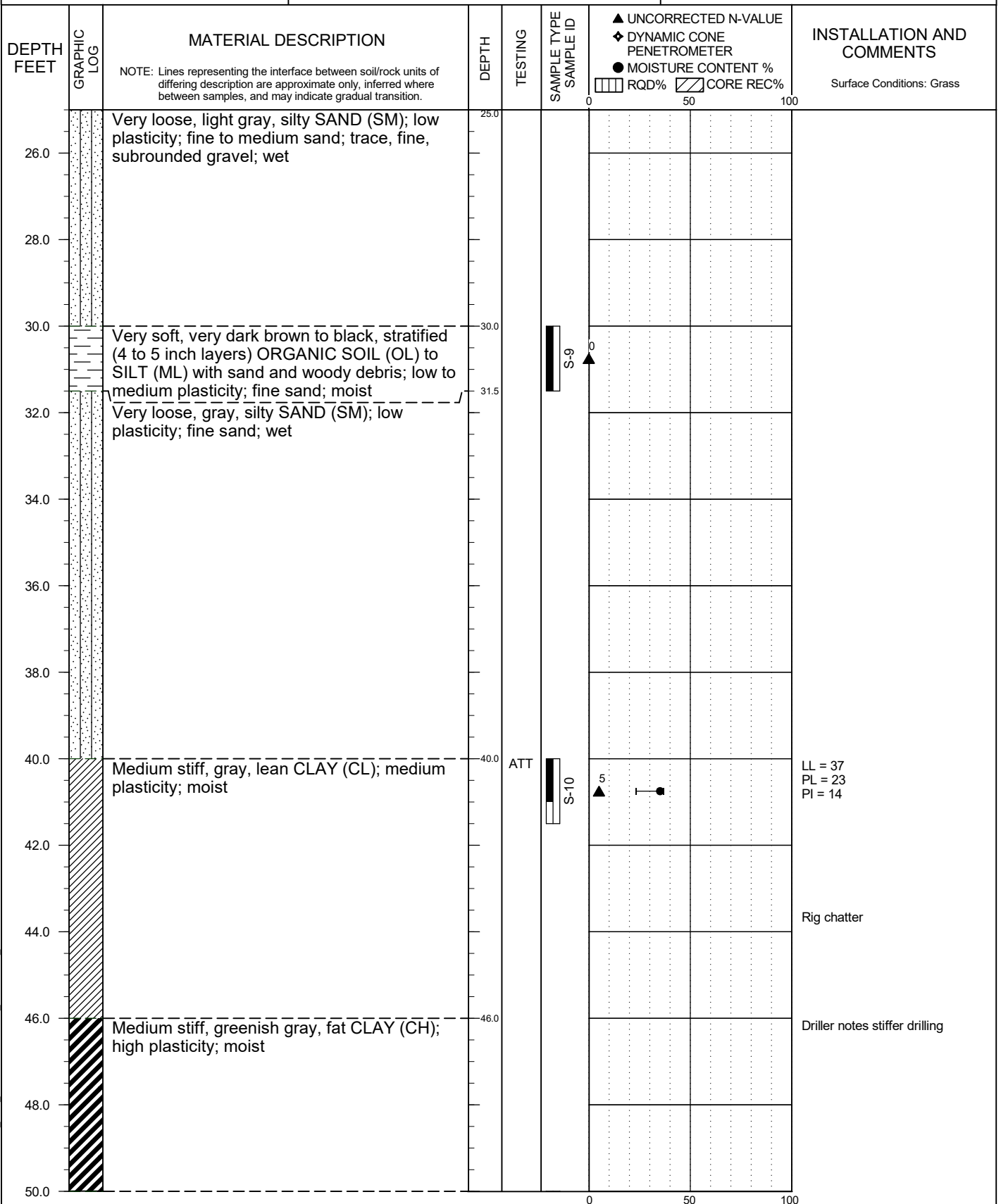


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-1
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-1 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A1
Page 2 of 3

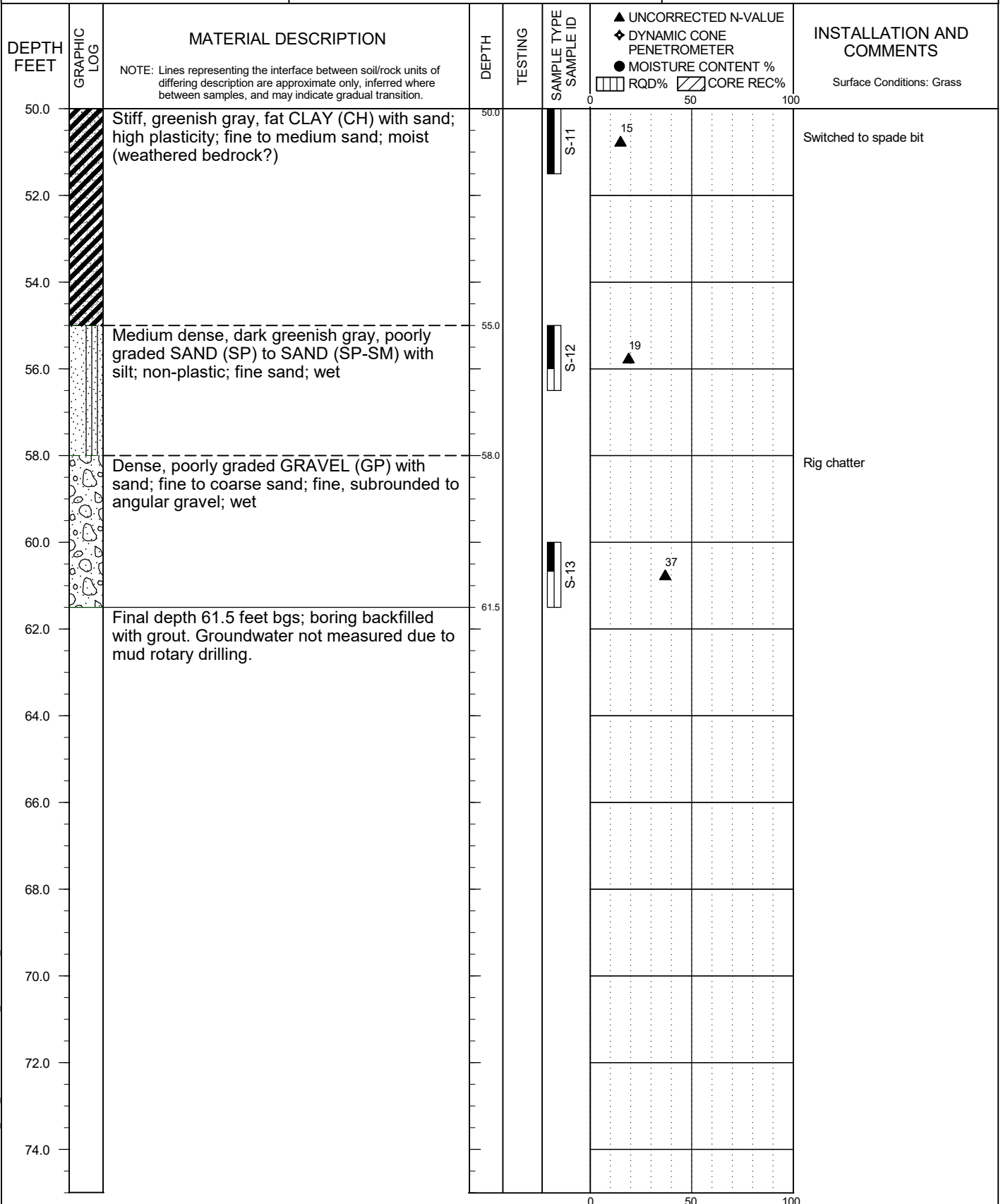


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-1
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-1 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A1
Page 3 of 3

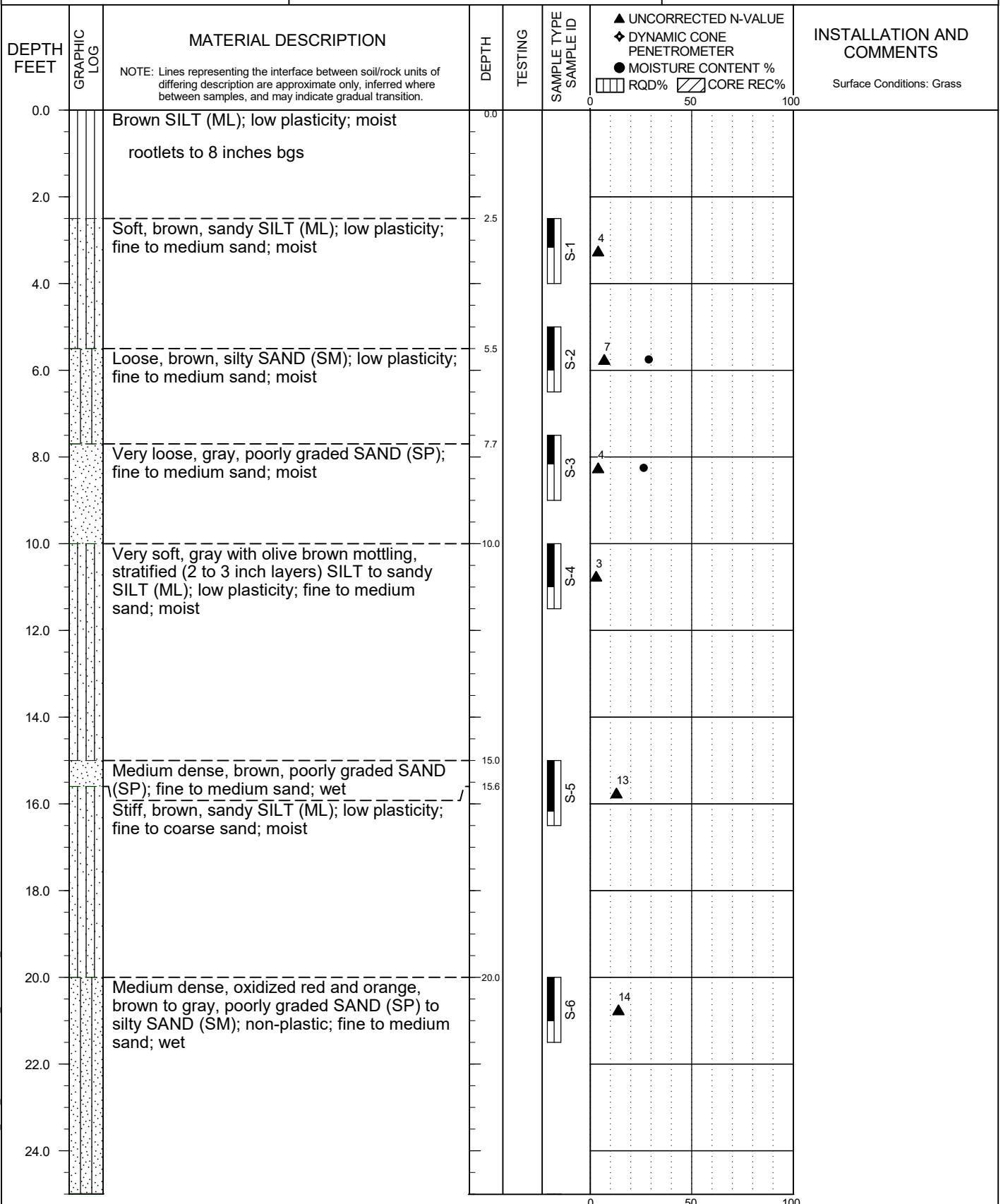


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-2

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-2 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A2
Page 1 of 2

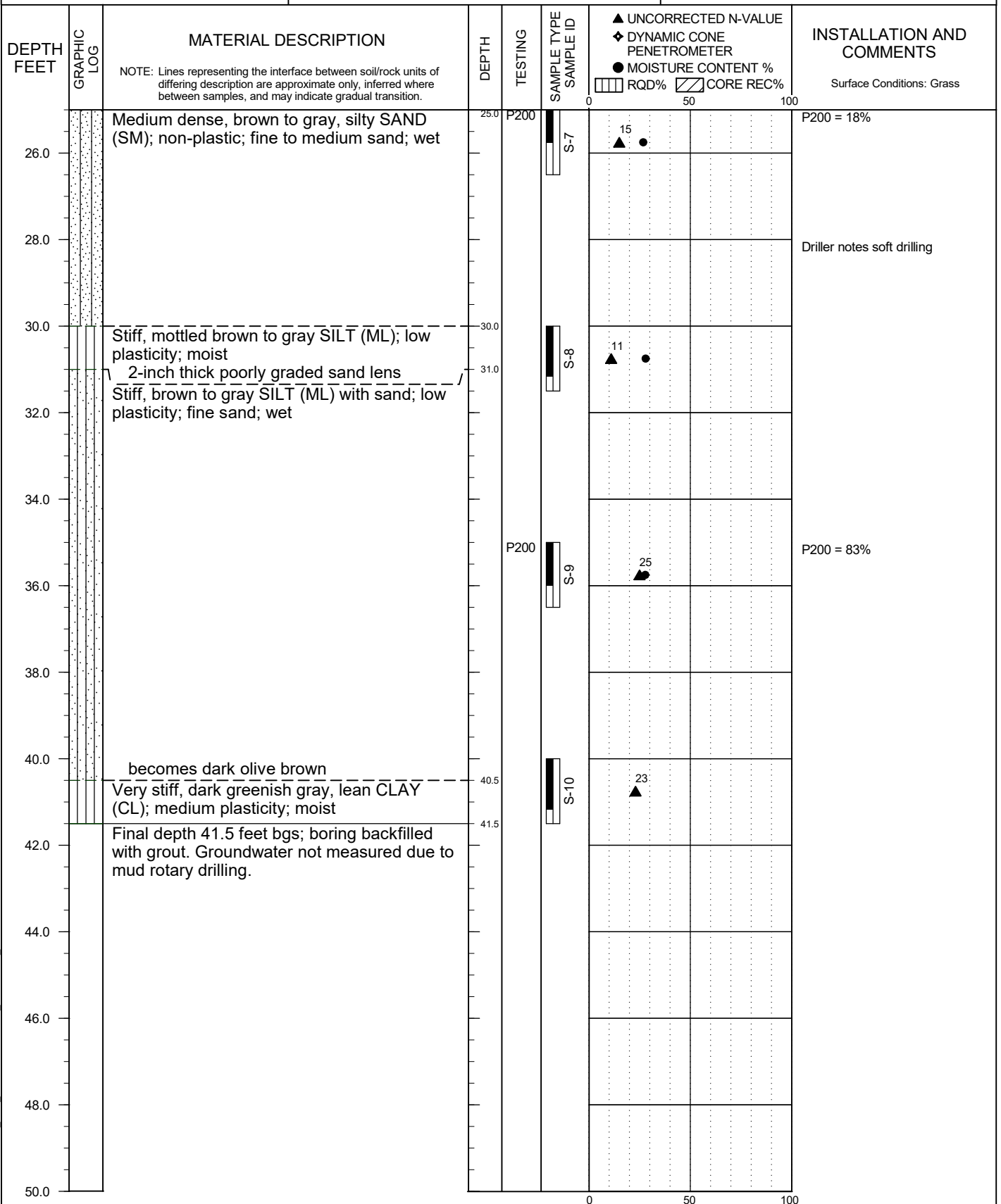


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-2
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-2 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A2
Page 2 of 2

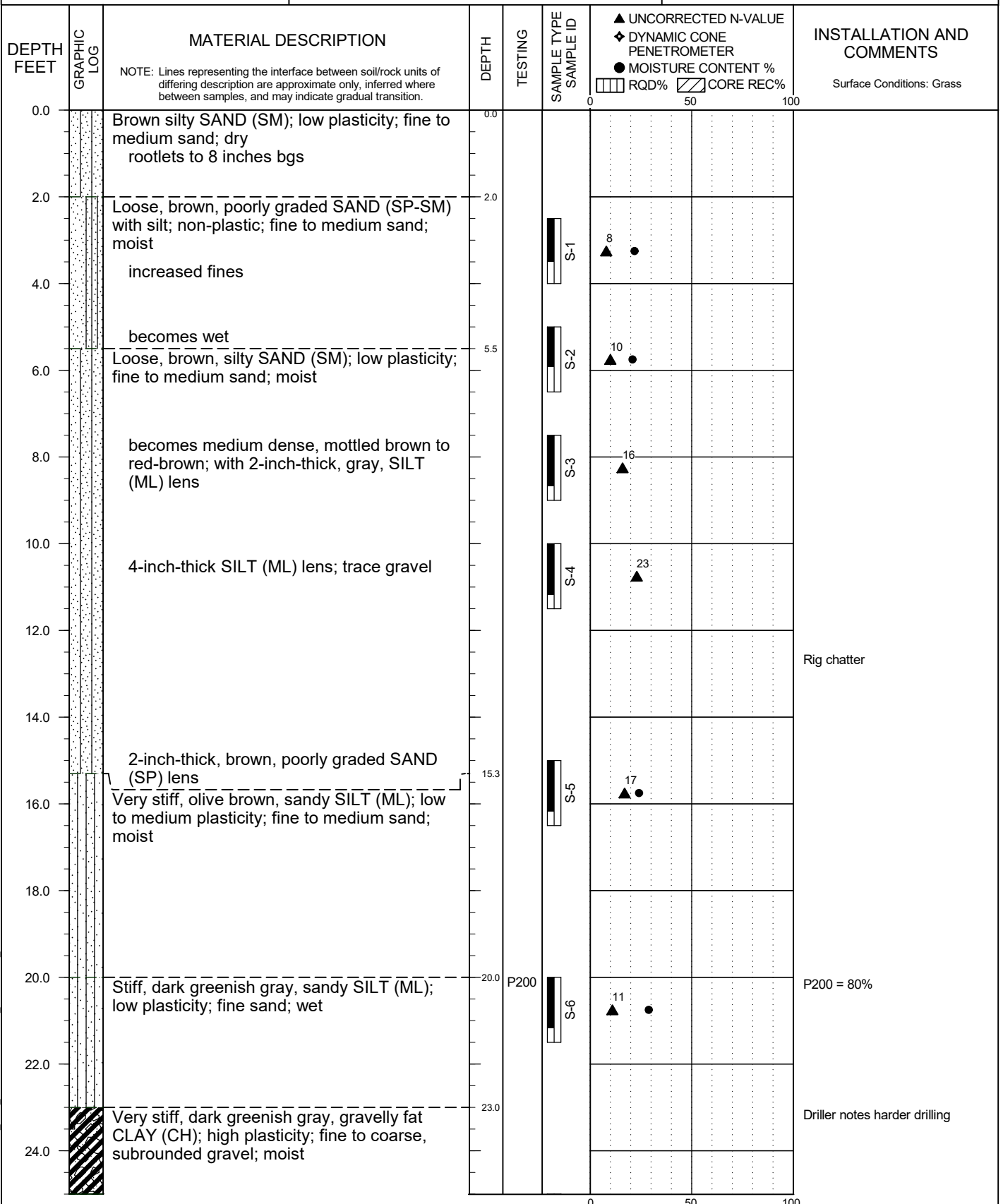


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-3

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-3 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A3
Page 1 of 2

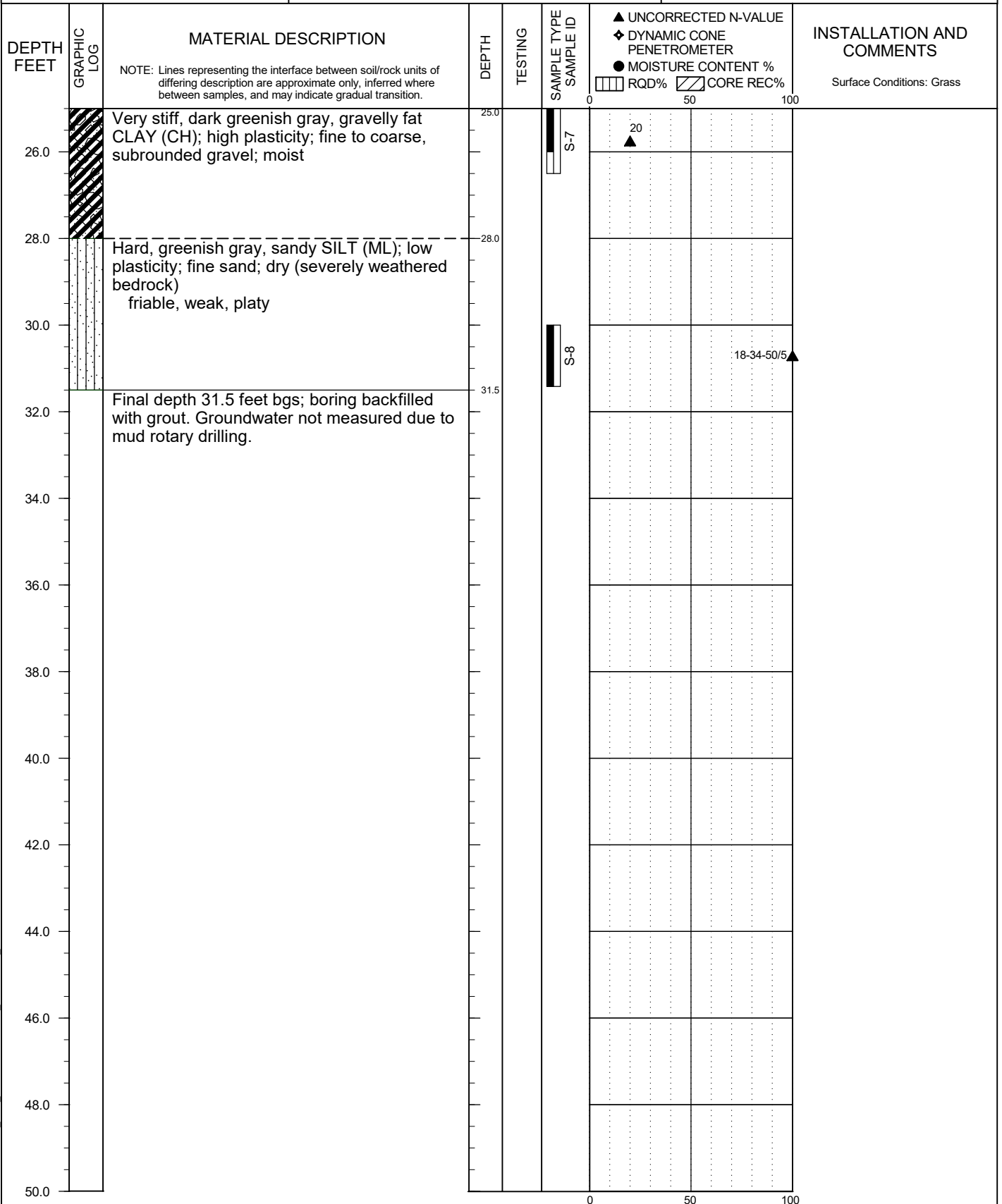


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-3
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-3 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A3
Page 2 of 2

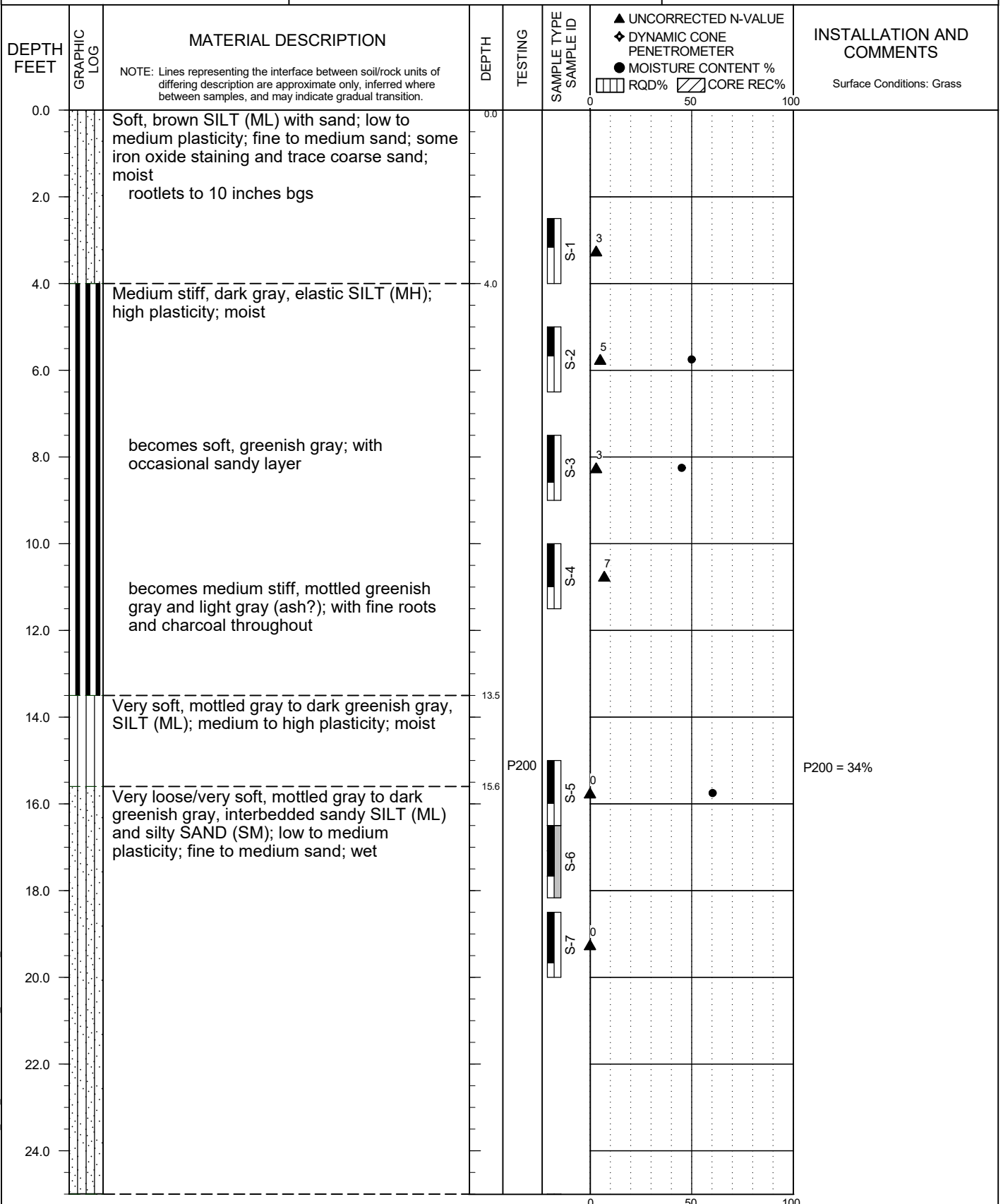


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-4

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-4 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A4
Page 1 of 2

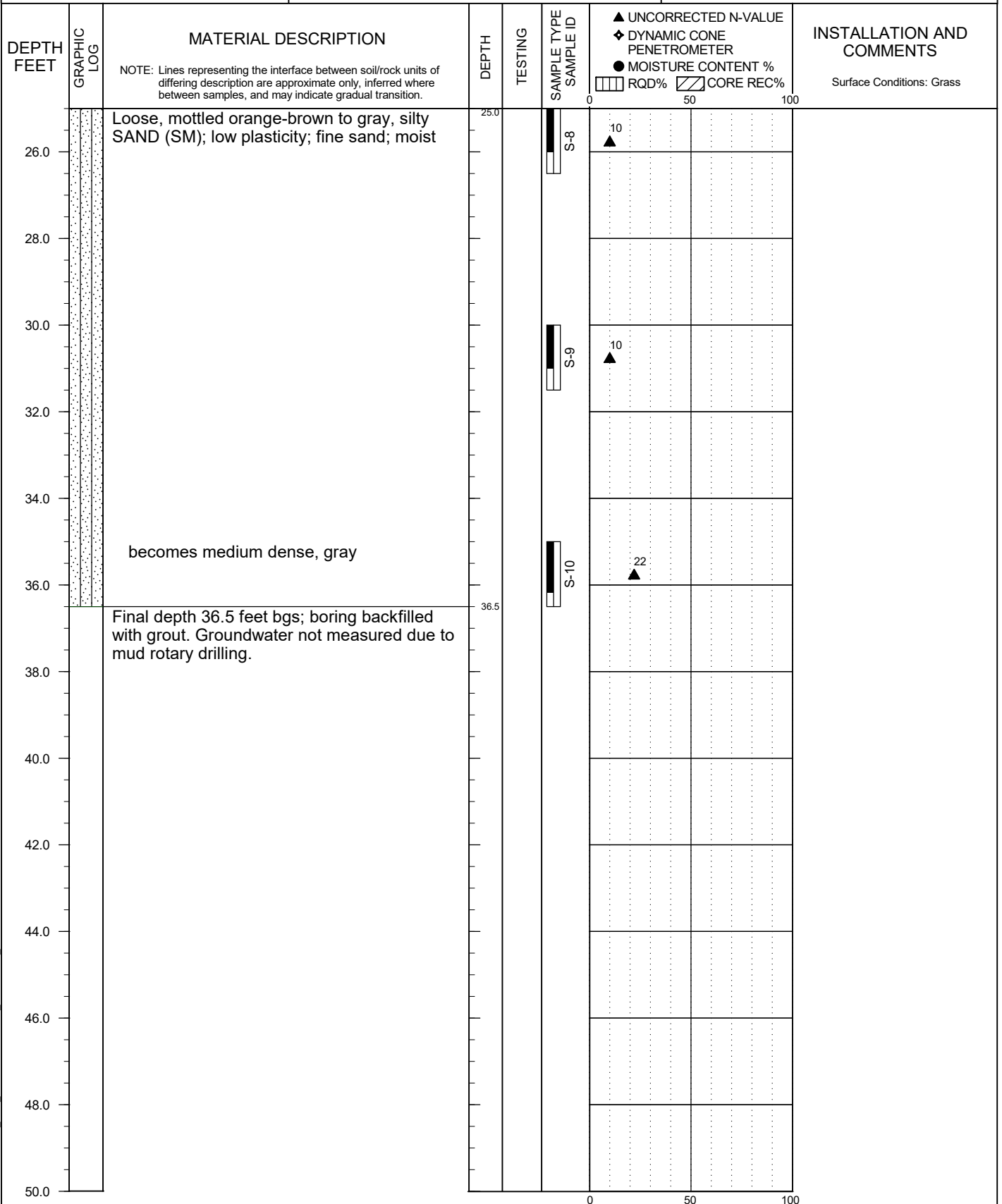


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-4
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-4 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

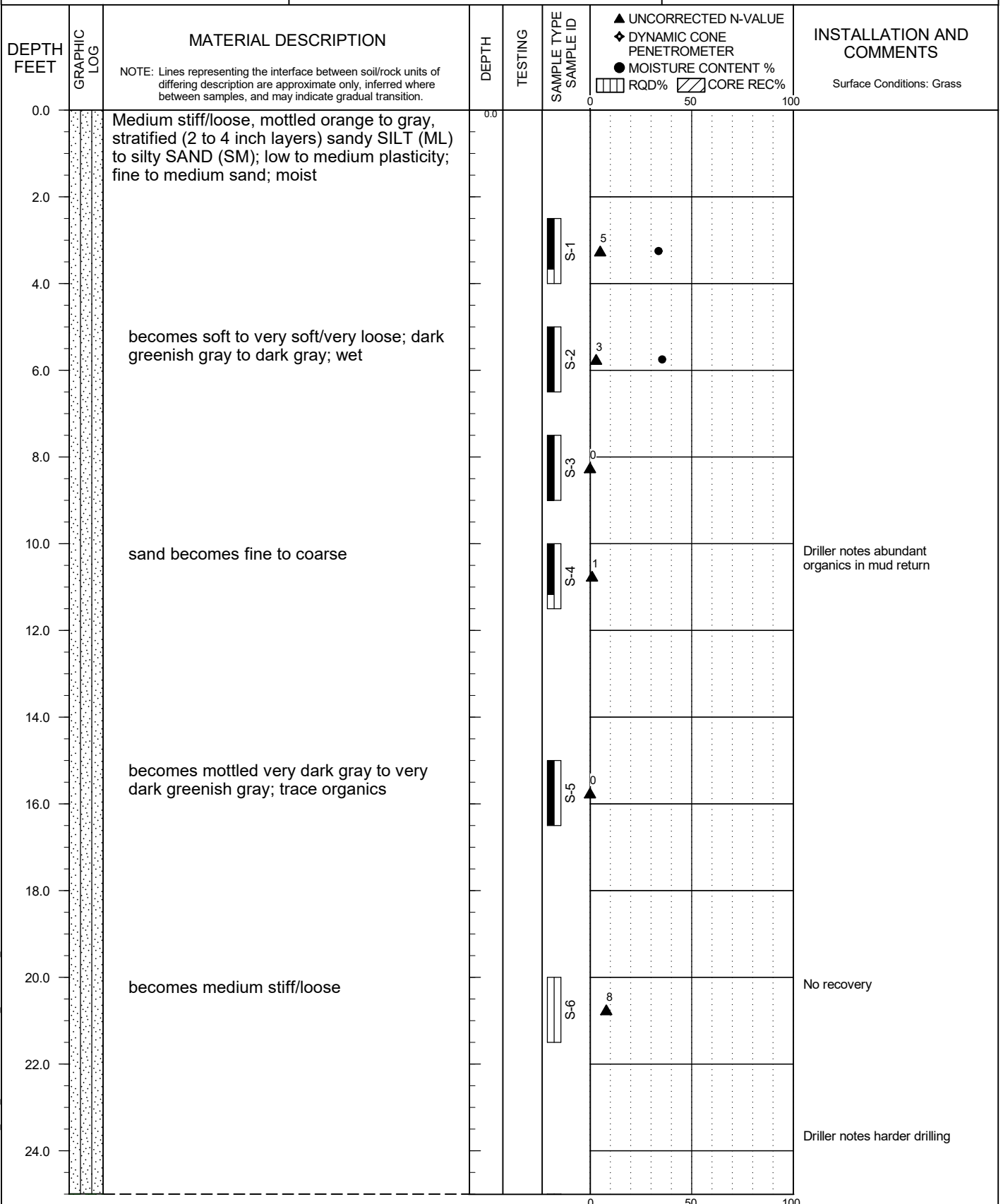


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-5

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-5 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A5
Page 1 of 2

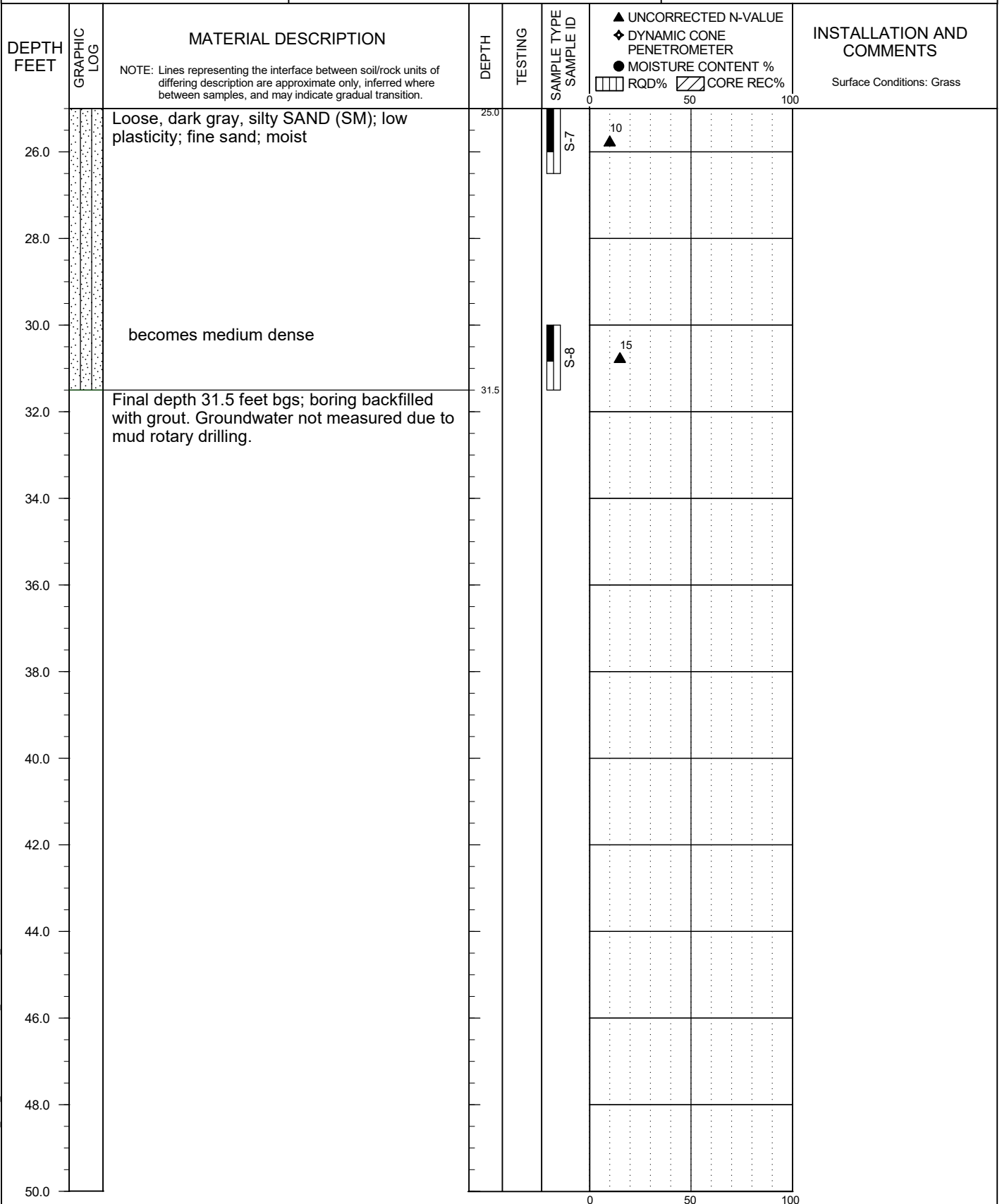


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-5
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-5 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

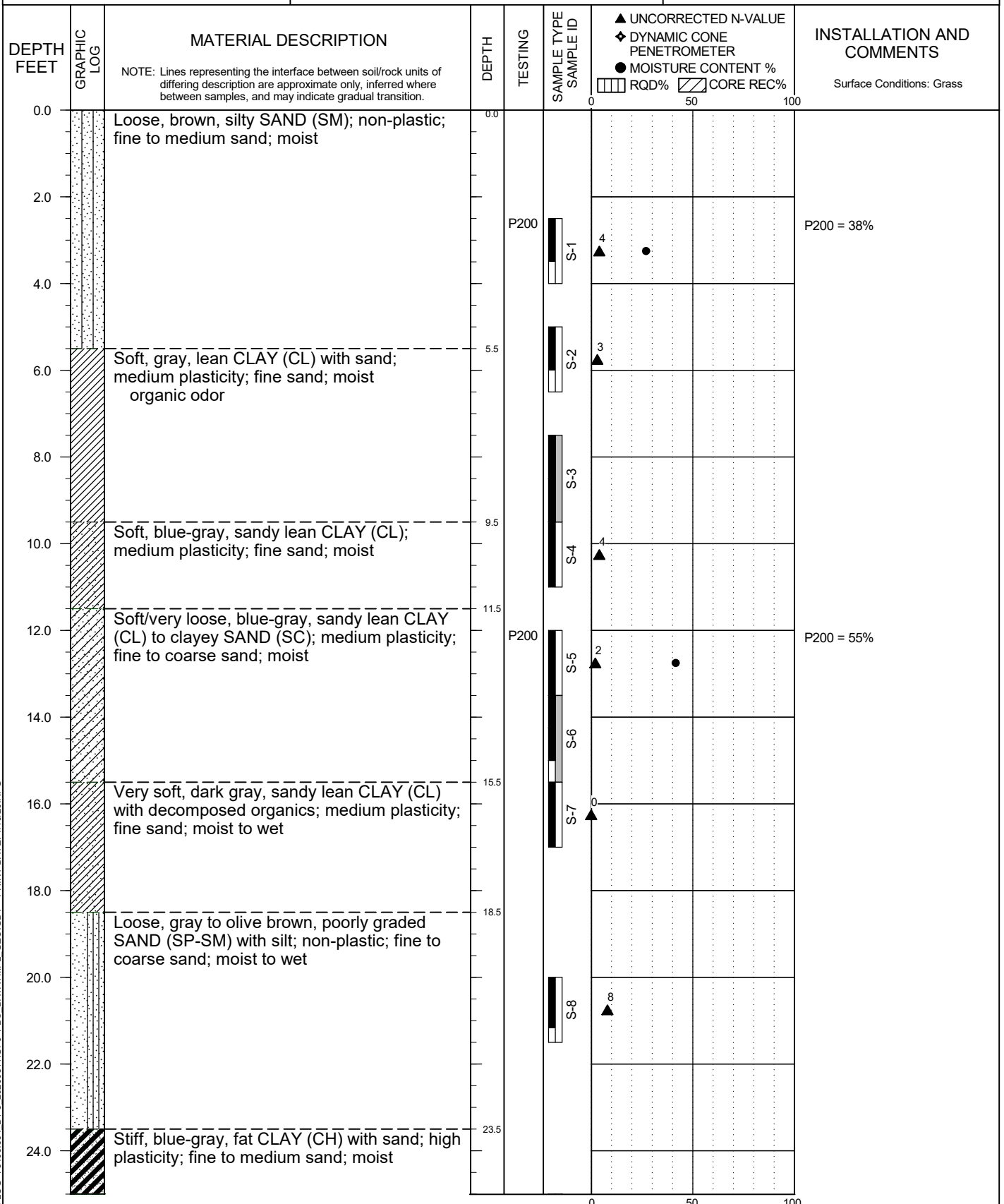


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-6

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-6 LOCATION:
46.154631, -122.903237



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020

FIGURE A6
Page 1 of 2

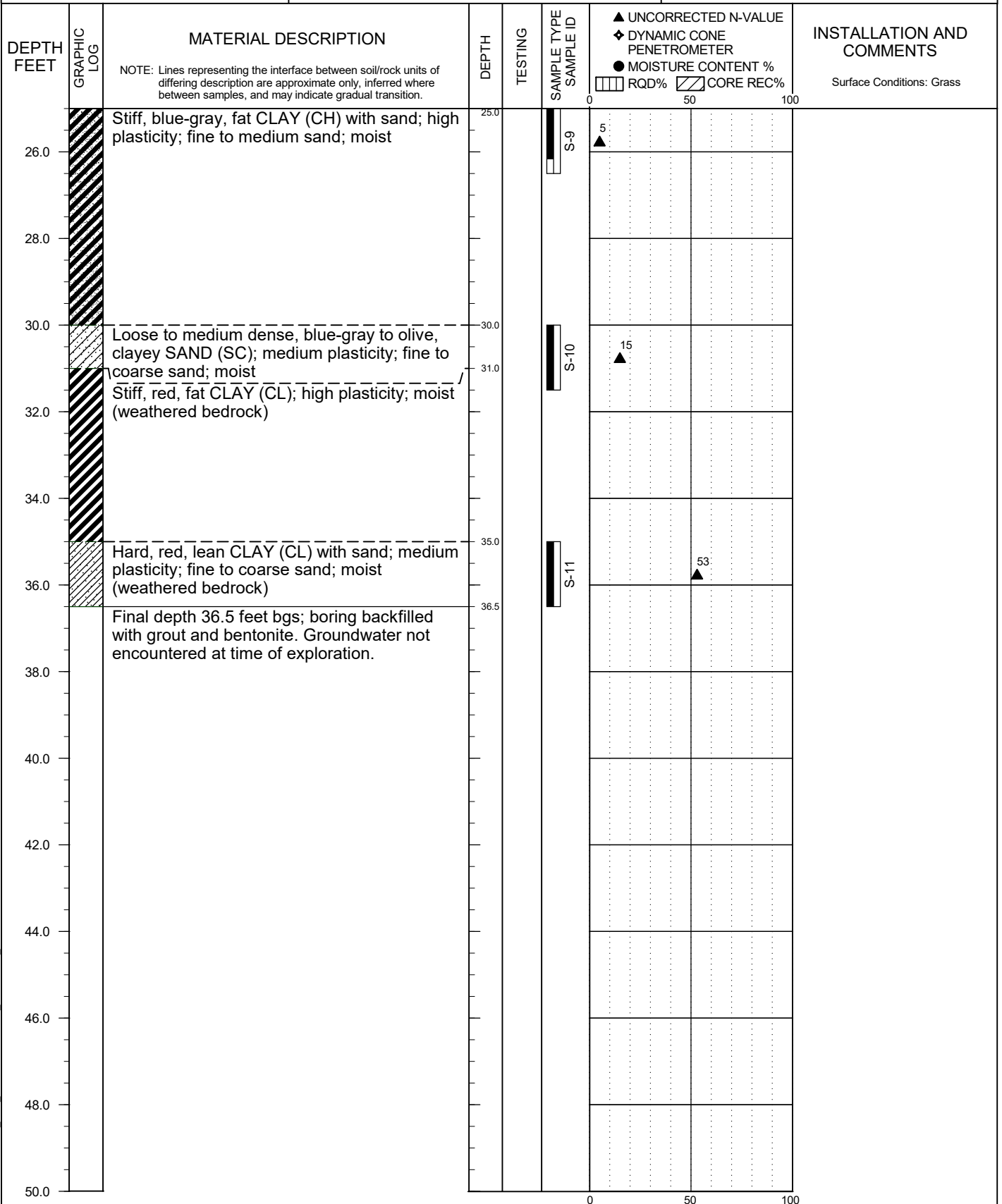


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-6
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-6 LOCATION:
46.154631, -122.903237



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020

FIGURE A6
Page 2 of 2

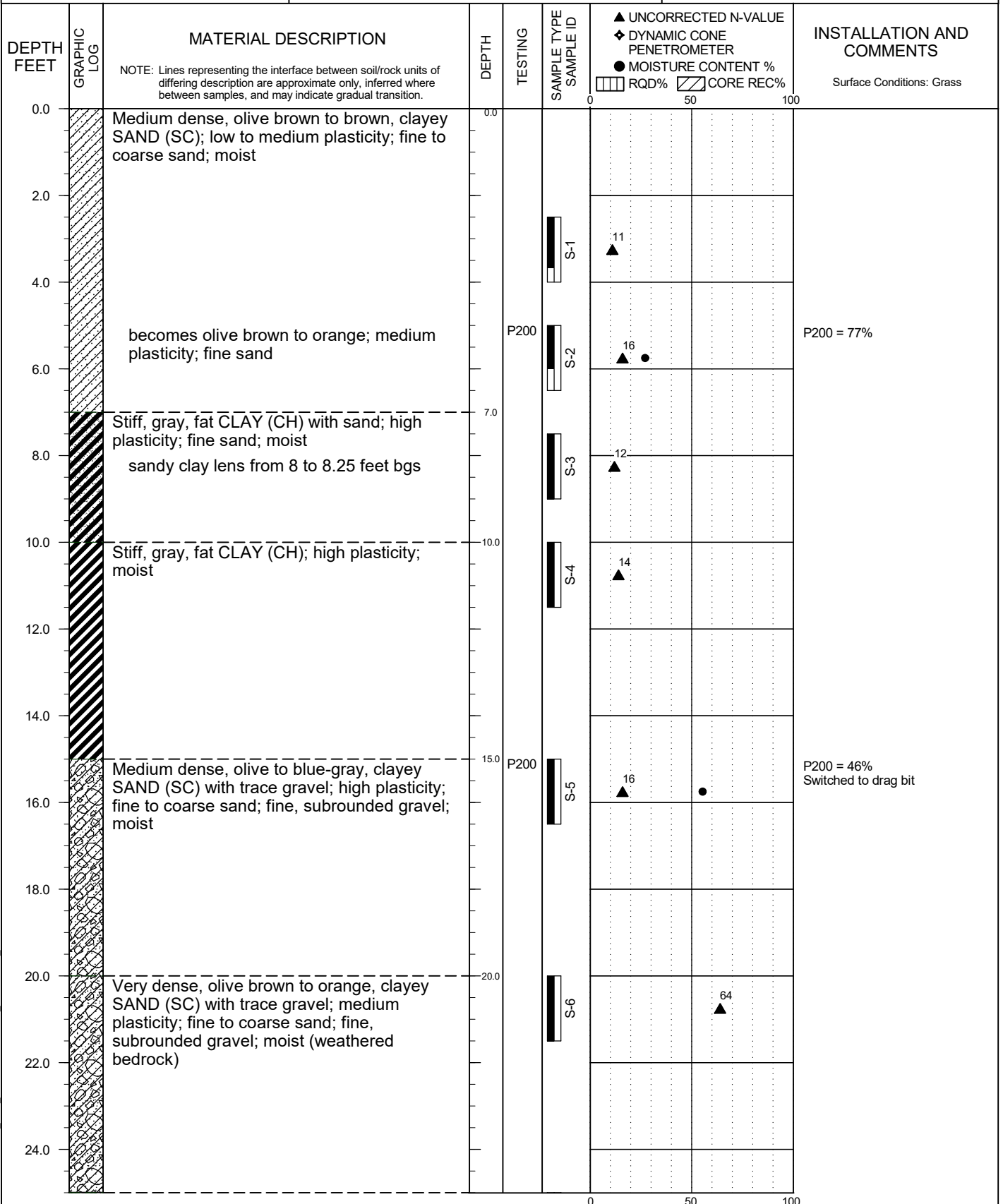


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-7

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-7 LOCATION:
46.154277, -122.903220



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mill Tooth/Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020

FIGURE A7
Page 1 of 2



HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-7
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-7 LOCATION:
46.154277, -122.903220

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION NOTE: Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	▲ UNCORRECTED N-VALUE ◆ DYNAMIC CONE PENETROMETER ● MOISTURE CONTENT % RQD% CORE REC%	INSTALLATION AND COMMENTS Surface Conditions: Grass
26.0		Very dense, blue-gray, olive, and orange, clayey SAND (SC); low plasticity; fine to medium sand; moist (weathered bedrock)	25.0		S-7	28-45-50/5▲	
		Final depth 26.5 feet bgs; boring backfilled with grout and bentonite. Groundwater not encountered at time of exploration.	26.5				
28.0							
30.0							
32.0							
34.0							
36.0							
38.0							
40.0							
42.0							
44.0							
46.0							
48.0							
50.0							

BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mill Tooth/Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020



PBS Engineering and Environmental, Inc.
4412 SW Corbett Avenue
Portland, Oregon 97239
www.pbsenv.com

CPT-1

Total depth: 58.89 ft, Date: 2/28/2020

Project: 73400.004 Huntington Middle School

Location: Kelso, Washington

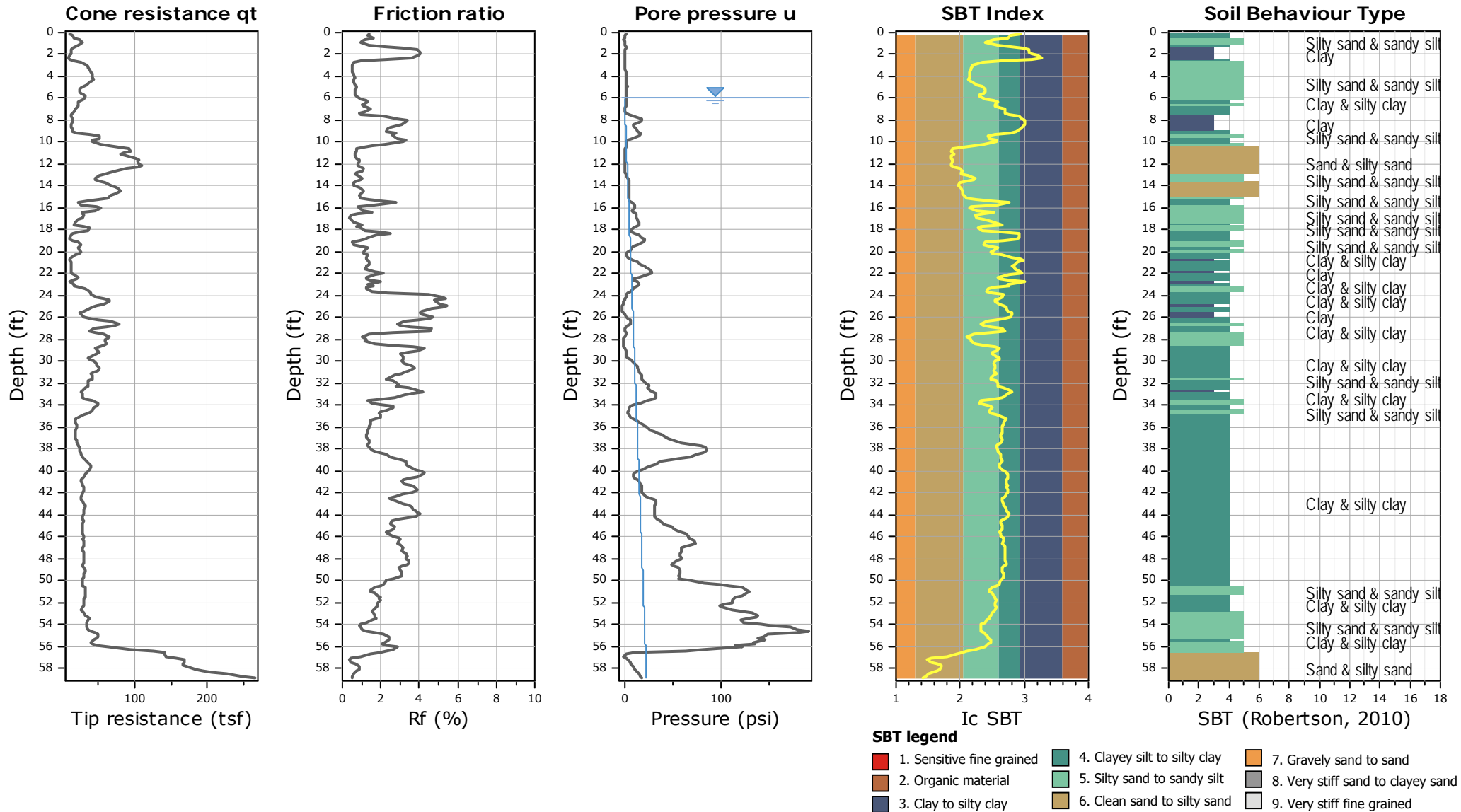


FIGURE A8



Project: 73400.004 Huntington Middle School

Location: Kelso, Washington

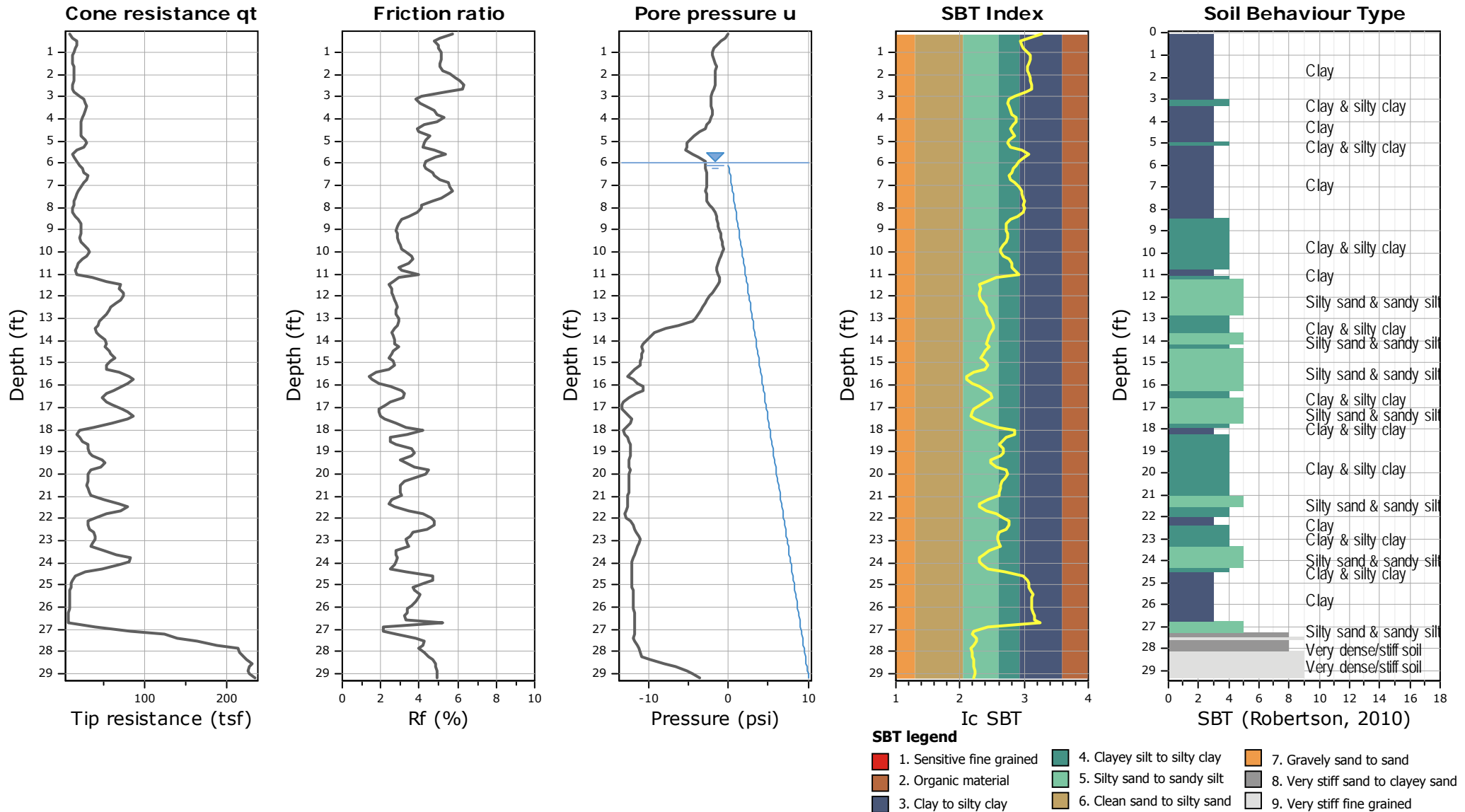
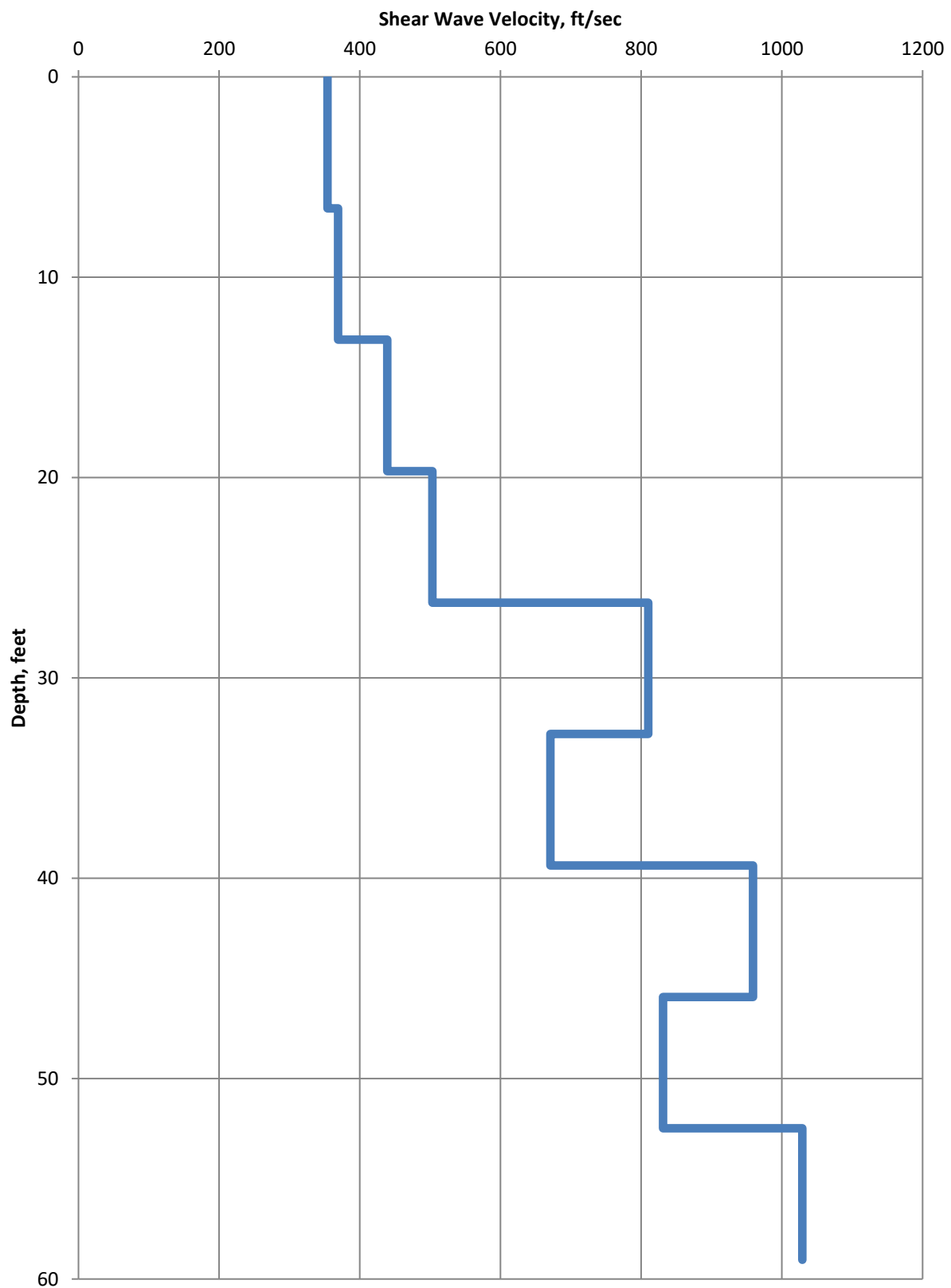


FIGURE A9



SHEAR WAVE VELOCITY PROFILE
HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

APR 2020
73400.004

FIGURE

A10

Appendix B

Laboratory Testing

Appendix B: Laboratory Testing

B1 GENERAL

Samples obtained during the field explorations were examined in the PBS laboratory. The physical characteristics of the samples were noted and field classifications were modified where necessary. During the course of examination, representative samples were selected for further testing. The testing program for the soil samples included standard classification tests, which yield certain index properties of the soils important to an evaluation of soil behavior. The testing procedures are described in the following paragraphs. Unless noted otherwise, all test procedures are in general accordance with applicable ASTM standards. "General accordance" means that certain local and common descriptive practices and methodologies have been followed.

B2 CLASSIFICATION TESTS

B2.1 Visual Classification

The soils were classified in accordance with the Unified Soil Classification System with certain other terminology, such as the relative density or consistency of the soil deposits, in general accordance with engineering practice. In determining the soil type (that is, gravel, sand, silt, or clay) the term that best described the major portion of the sample is used. Modifying terminology to further describe the samples is defined in Table A-1, Terminology Used to Describe Soil, in Appendix A.

B2.2 Moisture (Water) Contents

Natural moisture content determinations were made on samples of the fine-grained soils (that is, silts, clays, and silty sands). The natural moisture content is defined as the ratio of the weight of water to dry weight of soil, expressed as a percentage. The results of the moisture content determinations are presented on the logs of the borings in Appendix A and on Figure B2, Summary of Laboratory Data, in Appendix B.

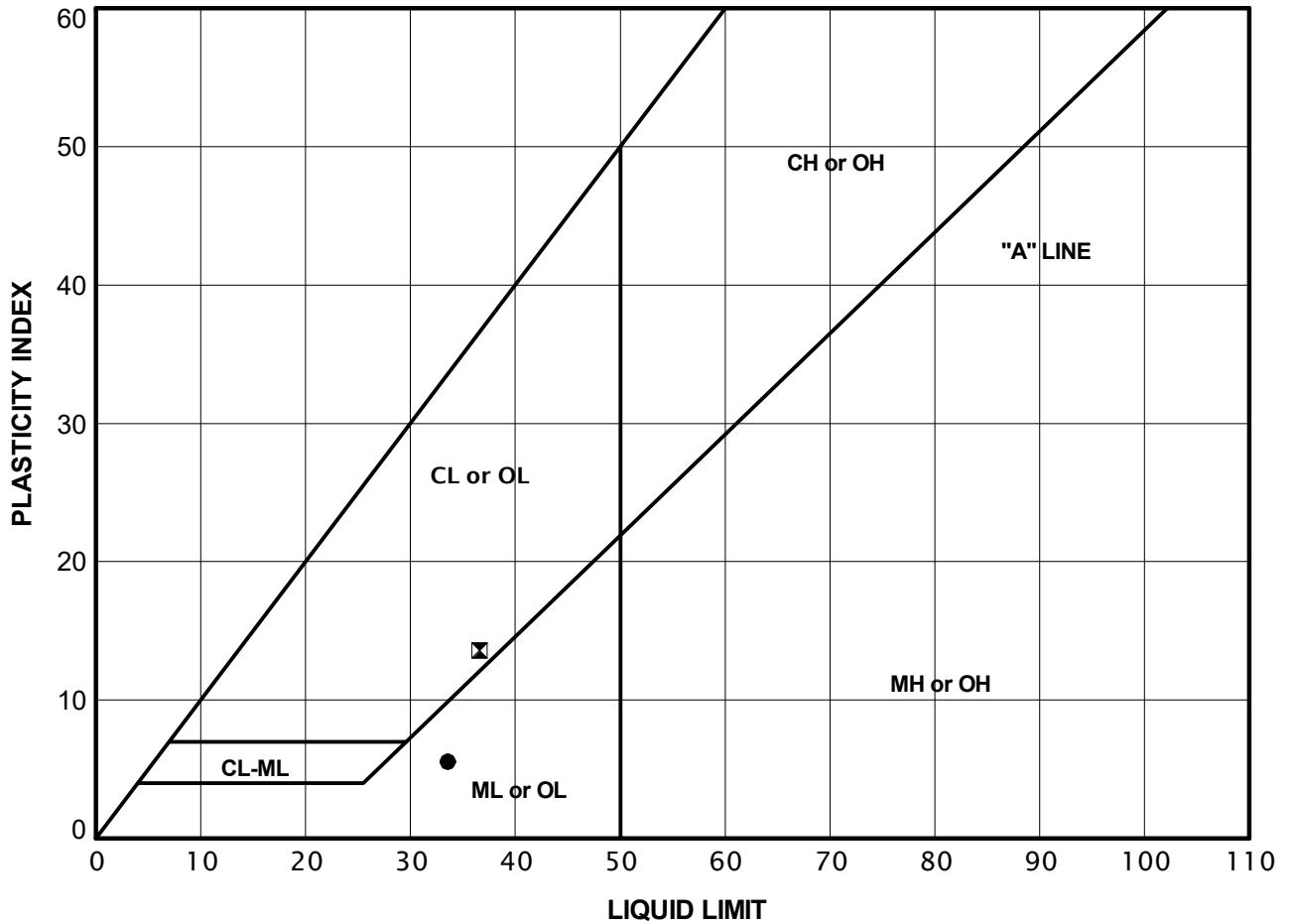
B2.3 Atterberg Limits

Atterberg limits were determined on select samples for the purpose of classifying soils into various groups for correlation. The results of the Atterberg limits test, which included liquid and plastic limits, are plotted on Figure B1, Atterberg Limits Test Results, and on the explorations logs in Appendix A where applicable.

B2.4 Grain-Size Analyses (P200 Wash)

Washed sieve analyses (P200) were completed on samples to determine the portion of soil samples passing the No. 200 Sieve (i.e., silt and clay). The results of the P200 test results are presented on the exploration logs in Appendix A and on Figure B2, Summary of Laboratory Data, in Appendix B.

TEST METHOD: ASTM D4318



KEY	EXPLORATION NUMBER	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	NATURAL MOISTURE CONTENT (PERCENT)	PERCENT PASSING NO. 40 SIEVE (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
●	B-1	S-6	20.0	45.4	NA	34	28	6
⊠	B-1	S-10	40.0	35.0	NA	37	23	14

FIGURE B1
Page 1 of 1



SUMMARY OF LABORATORY DATA

HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

PBS PROJECT NUMBER:
73400.004

SAMPLE INFORMATION

MOISTURE
CONTENT
(PERCENT)

DRY
DENSITY
(PCF)

SIEVE

ATTERBERG LIMITS

EXPLORATION
NUMBER

SAMPLE
NUMBER

SAMPLE
DEPTH
(FEET)

ELEVATION
(FEET)

GRAVEL
(PERCENT)

SAND
(PERCENT)

P200
(PERCENT)

LIQUID
LIMIT
(PERCENT)

PLASTIC
LIMIT
(PERCENT)

PLASTICITY
INDEX
(PERCENT)

B-1

S-1

2.5

55.0

B-1

S-2

5

41.5

67

B-1

S-6

20

45.4

34

28

6

B-1

S-10

40

35.0

37

23

14

B-2

S-2

5

28.8

B-2

S-3

7.5

26.3

B-2

S-7

25

26.7

18

B-2

S-8

30

27.9

B-2

S-9

35

27.7

83

B-3

S-1

2.5

21.8

B-3

S-2

5

20.8

B-3

S-5

15

24.0

B-3

S-6

20

28.8

80

B-4

S-2

5

49.9

B-4

S-3

7.5

45.0

B-4

S-5

15

60.2

34

B-5

S-1

2.5

33.6

B-5

S-2

5

35.4

B-6

S-1

2.5

26.9

38

B-6

S-5

12

41.5

55

B-7

S-2

5

27.0

77

B-7

S-5

15

55.3

46

Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer

will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the “Findings” Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site’s subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual site-wide subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report’s Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals’ misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals’ plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note*

conspicuously that you’ve included the material for information purposes only. To avoid misunderstanding, you may also want to note that “informational purposes” means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled “limitations,” many of these provisions indicate where geotechnical engineers’ responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a “phase-one” or “phase-two” environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer’s services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer’s recommendations will not of itself be sufficient to prevent moisture infiltration.* Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists.*



**GEOPROFESSIONAL
BUSINESS
ASSOCIATION**

Telephone: 301/565-2733

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April 2, 2021

Mr. Scott Westlund
Executive Director of Business and Operations
Kelso School District
601 Crawford Street
Kelso, Washington 98626

Via email: scott.westlund@kelsosd.org

Regarding: Geotechnical Engineering Report Addendum No. 1
 Huntington Middle School Renovation and Gymnasium Addition
 500 Redpath Street
 Kelso, Washington 98626
 PBS Project 73400.004

Dear Mr. Westlund:

PBS Engineering and Environmental Inc. (PBS) completed a geotechnical evaluation for the Kelso School District proposed additions and seismic retrofit at Huntington Middle School in Kelso, Washington, and presented the results in a geotechnical engineering report (GER) dated July 7, 2020.¹ This letter should be considered an addendum to and used only in conjunction with the full GER for the project.

Project planning and design were in the conceptual stages at the time PBS completed the project GER. Subsequent to completing our report, retaining walls were added and the design team has requested retaining wall design parameters from PBS.

RETAINING WALLS

Per email communications with Integrus Architecture (Integrus) and review of the Integrus plan set titled *Kelso School District No. 453 Huntington Middle School* and dated March 23, 2021, PBS understands that two cast in place (CIP) retaining walls will be constructed, including one along the north side of the chiller pad located south of the main academic wing, and the second along the southeast side of the new gymnasium for a stair landing. A summary of the wall configuration provided by Integrus is included below.

Walls North of Building 1

- Fill walls
- Backslope is flat, interior concrete slab on grade (new construction)
- In front of the wall: 5% slope away from wall to shed rainwater

Walls South of Building 1

- Cut walls
- Backslopes range from 14% to 35%
- In front of the wall: Asphalt or concrete on grade sloping at 1% away from wall (new construction)

¹ PBS Engineering and Environmental Inc. (July 7, 2020). Geotechnical Engineering Report, Huntington Middle School Renovation and Gymnasium Addition. Kelso, Washington. Prepared for Kelso School District. PBS Project 73400.004.

Lateral Earth Pressures

The following recommendations are based on the assumption that retaining walls are unrestrained and are allowed to rotate at least 0.05H about the base, where H is the height of the wall, and the backfill is fully drained. For fill walls with flat backfill, supporting structural fill, we recommend using an active earth pressure of 32 pounds per square foot (psf). For cut walls supporting native soft to medium silt soils with backslopes of up to 35% (approximately 3H:1V), we recommend using an active earth pressure of 52 psf.

We recommend any retaining walls founded on firm native soil or compacted structural fill, be provided with adequate drainage and backfilled with clean, angular, crushed rock fill.

For seismic loading, we recommend using an inverted triangular distribution (seismic surcharge) equivalent to 22H psf. Walls should be designed by applying the active earth pressure plus the seismic loading. If vertical surcharge loads, q , are present within 0.5H of the wall, use a lateral surcharge of 0.25 q for fill walls and 0.45 q for cut walls with up to a 35% backslope inclination. Seismic lateral earth pressures were computed using the Mononobe-Okabe equation.

Lateral loads can also be resisted by a passive resistance of 250 psf acting against retaining wall footings embedded at least 18 inches below the existing ground surface (bgs), ignoring resistance in the top 12 inches of unpaved areas, and by friction acting on the base of footings using a friction coefficient of 0.35.

Allowable Bearing Pressure

Retaining wall footings should be at least 18 inches wide. Footings should be sized using a maximum allowable bearing pressure of 2,000 psf for static conditions. Due to the susceptibility of site soils to liquefaction, retaining walls should be underlain by improved soil. Retaining walls located outside the soil improvement areas may experience loss of bearing and excessive deformation as a result of a code-based earthquake.

Footings will settle in response to wall construction and backfilling. Based on our evaluation of the subsurface conditions and our analysis, we estimate post-construction static settlement will be less than 1 inch. Differential settlement will be on the order of one-half of the total settlement.

Drainage

Recommended lateral earth pressures assume that walls are fully drained and no hydrostatic pressures develop. For cantilevered concrete walls, a minimum 2-foot-wide zone of free-draining material should be installed immediately behind the wall. A 4-inch diameter perforated drain pipe should be installed at the base of the drain rock and routed to a suitable discharge point approved by the civil engineer.

Granular Drain Backfill Material

Backfill in a 2-foot-wide zone against the back of retaining walls and for subsurface trench drains should consist of granular drain rock meeting the specifications provided in Washington Department of Transportation (WSDOT) SS 9-03.12(4) – Gravel Backfill for Drains. The granular drain rock should be wrapped in a geotextile fabric that meets the specifications provided in WSDOT SS 9-33.2 – Geosynthetic Properties, Tables 1 and 2, for drainage geotextile.

Retaining Wall Backfill

Backfill material placed behind retaining walls and extending a horizontal distance of 0.5H, where H is the height of the retaining wall, should consist of granular material meeting WSDOT SS 9-03.12(2) – Gravel Backfill for Walls. We recommend the granular wall backfill be separated from general fill, native soil, and/or topsoil using a

geotextile fabric that meets the requirements provided in WSDOT SS 9-33.2 – Geosynthetic Properties, Table 3, for separation geotextile.

The wall backfill should be compacted to a minimum of 92% of the maximum dry density, as determined by ASTM D1557. However, backfill located within a horizontal distance of 3 feet from the retaining walls should only be compacted to approximately 90% of the maximum dry density, as determined by ASTM D1557. Backfill placed within 3 feet of the wall should be compacted in lifts less than 6 inches thick using hand-operated tamping equipment (such as jumping jack or vibratory plate compactor).

CLOSING

We trust this letter meets your current needs. Please feel free to contact me at 503.539.5028 or ryan.white@pbsusa.com with any comments or questions.

Sincerely,



04/01/2021

Ryan White, PE, GE (OR)
Principal Geotechnical Engineer
PBS Engineering and Environmental Inc.

SC:RW:rg



May 5, 2021

Kelso School District
601 Crawford Street
Kelso, Washington 98626

Regarding: Soil Improvement – Geotechnical Basis of Design
Huntington Middle School Renovation and Gymnasium Addition
500 Redpath Street
Kelso, Washington 98626
PBS Project PR73400.004

PBS Engineering and Environmental Inc. (PBS) has prepared this letter summarizing the design basis for the proposed ground improvement at the Huntington Middle School site in Kelso, Washington.

BACKGROUND

Design-build ground improvement is being considered for the development of the Huntington Middle School site in Kelso, Washington. The general site location is shown on the Vicinity Map, Figure 1. The locations of geotechnical explorations in relation to existing site features are shown on the Site Plan, Figure 2.

PBS understands that the Kelso School District intends to renovate the existing academic structures at Huntington Middle School and construct a new 5,500-square-foot gymnasium along the north side of the existing academic building, adjacent to the western parking lot and bus lane.

DESCRIPTION OF WORK

Ground improvement is necessary at the site to mitigate the effects of liquefaction. The design-build contractor is expected to select and design an appropriate ground improvement system to meet the performance requirements defined in the following sections of this letter.

PERFORMANCE REQUIREMENTS

Parameter	Value		Notes
	Static	Seismic	
Minimum Bearing Capacity (lb/ft ²)	2,500	3,300	The allowable bearing pressure is increased by 1/3 for seismic conditions or other instances of transient loading.
Total Settlement (in)	1	4	The total settlement at the top of the ground improvement elements due to allowable bearing pressure.
Differential Settlement (in/30 ft)	0.75	2	Differential settlement at the top of the ground improvement elements under the allowable static or seismic bearing pressure.
Lateral Spread (in)	--	18	The maximum allowable lateral spread displacement, measured at the ground surface and the leading edge of the building, computed for the critical cross section.

DESIGN REQUIREMENTS

Parameter	Value		Notes
EQ Source	Cascadia Subduction Zone (CSZ)		
Magnitude (M_w)	9.0		2014 Deaggregation
PGA_M (g)	0.49		ASCE 7-16
Groundwater Depth (ft)	7.0		Assumed to be level across the site.
Minimum Embedment (ft)	>40 feet		The minimum embedment depth should correspond to the minimum required crust thickness to reduce risk of surface manifestation of liquefaction and limit seismic settlement to the required magnitude.
Minimum Extent Beyond Footprint (ft)	Stone Columns	DSM	This is the minimum extent of the treatment area beyond the footprint of the building. "L" is the length of an adjacent ground improvement element located within the building footprint.
	$\frac{1}{2}$ L	0 L	

SURFACE CONDITIONS

The site is located near the terminus of the Cowlitz River valley and is positioned east of the Cowlitz River, downslope and adjacent to Interstate 5. The school is bordered immediately to the west by North Kelso Avenue, to the south by densely vegetated slope and upslope residential properties, to the east by a densely vegetated slope and upslope Interstate 5, and to the north by North Kelso Avenue and an upslope residential property.

The school is composed of a primary academic building, oriented east to west, with two permanent structures located south of the primary academic structure, and a modular structure to the east. A track-and-field area is located south of the academic buildings and a large open grass field is located to the north. A staff parking lot is situated between the academic structures, and additional parking and bus drive lanes are located to the west at the front of the school.

Review of available LiDAR data indicates the site is surrounded by slopes to the north, east, and south that give rise to a higher terrace surface (WADNR, 2020).¹ The academic structures are positioned on a higher surface that we interpret as a fluvial terrace associated with deposition by the Cowlitz River. The site slopes down from an elevation of approximately 37 feet above mean sea level (amsl) at the east end of the site where the modular structure is located, to elevations ranging from 17 to 21 feet amsl along the west side of the academic buildings (NAVD88). The contours on Figure 2 provide a coherent outline of this higher surface, with definitive slope break along the south, east, and north sides of the campus.

¹ Washington Department of Natural Resources (WADNR) Washington Lidar Portal [Interactive Map]. (2020). Washington Department of Natural Resources. Accessed March 2020 from <http://lidarportal.dnr.wa.gov/>.

GEOLOGIC SETTING

The site is located at the northern extent of the Portland Basin, a tectonic depression within the physiographic province of the Puget-Willamette Lowland (PWL). The PWL separates the Cascade Range from the Washington coastal range (Willapa Hills and Olympic Mountains) and extends from the Puget Sound to Eugene, Oregon.² At this location, the Portland Basin and PWL terminate against the geologic provinces of the Willapa Hills to the northwest and the South Cascades to the north and northeast.

The PWL is situated along the Cascadia Subduction Zone (CSZ) where oceanic rocks of the Juan de Fuca Plate are subducting beneath the North American Plate, resulting in deformation and uplift of the coast range and volcanism in the Cascade Range (Figure 3). Active northwest-trending faults accommodating clockwise rotation of the North American Plate are found throughout the Puget-Willamette lowland.^{3, 4} Older inactive faults and folds are found throughout the entire region, juxtaposing bedrock units, including the nearby Columbia Hills Anticline and Kelso fault (Figure 4).

SUBSURFACE CONDITIONS

The site was explored by drilling seven borings, designated B-1 through B-7, to depths of 26.5 to 61.5 feet bgs. The drilling was performed by Holt Services, Inc., of Vancouver, Washington, using a track-mounted Mobile B-57 drill rig and mud rotary drilling techniques. Two additional cone penetration tests (CPTs) were completed to depths of approximately 29 and 59 feet bgs by Oregon Geotechnical Explorations using a track-mounted Geoprobe Model 6622 CPT rig.

PBS has characterized the subsurface data collected from SPT samples and CPTs, summarized as follows:

SOFT SEDIMENTS (ML, CL, CH, SP-SM, SP, GP):	Interbedded fluvial sediments were encountered in borings B-1, B-2, B-4, B-5, and B-6 from the ground surface to the termination depth. In boring B-6, these soft sediments persisted to approximately 23 feet bgs before older terrace sediments were encountered. Fine-grained materials varied from low plasticity silts to high plasticity clays. Coarse-grained materials ranged in composition from poorly graded sand with silt to poorly graded gravel. Fine-grained materials were very soft to very stiff, with SPT N-values between 0 and 23 blows to advance the sampler 12 inches, were olive gray to brown in color, moist to wet, exhibited low to high plasticity, and contained fine-grained sand. Coarse-grained materials were very loose to dense, with SPT N-values between 0 and 37, primarily gray, moist to wet, with fine- to medium-grained sand, non-plastic fines, and included subrounded gravels at depth.
CONSOLIDATED SEDIMENTS (ML, CL, CH, SP-SM, SM):	Older terrace sediments were encountered in borings B-3 and B-7 from the ground surface to approximately 30 feet bgs. These materials were primarily coarse-grained sediments with lesser constituents of fine-grained materials. Materials varied from poorly graded sand with silt to silty sand. Materials were loose to medium dense with

² Yeats, R. S., Graven, E. P., Werner, K. S., Goldfinger, Chris, and Popowski, T. A. (1996). Tectonics of the Willamette Valley, Oregon, in Rogers, A. M., Walsh, T. J., Kockelman, W. J., and Priest, G. R., eds., Assessing earthquake hazards and reducing risk in the Pacific Northwest: US Geological Survey Professional Paper 1650, v. 1, p. 183–222.

³ Brocher, T. M., Wells, R. E., Lamb, A. P., and Weaver, C. S. (2017). Evidence for distributed clockwise rotation of the crust in the northwestern United States from fault geometries and focal mechanisms. *Tectonics*, Vol. 36, No.5, pp. 787–818.

⁴ US Geological Survey (USGS). (2006). Quaternary fault and fold database for the United States, accessed March 13, 2020, from USGS website: <http://earthquake.usgs.gov/hazards/qfaults/>.

SPT N-values between 8 and 23, primarily brown in color, moist to wet, fine- to medium-grained sand, and contained low plasticity fines. With increasing depth, fine-grained materials were encountered at approximately 15 feet bgs. These materials are described as very stiff lean and fat clays with SPT N-values between 11 and 20, ranged in color from olive brown to greenish gray, were moist to wet, exhibited medium to high plasticity, and contained fine-grained sand and fine to coarse subrounded gravels.

**WEATHERED
BEDROCK (RX):** Weathered bedrock was encountered in boring B-3 at approximately 28 feet bgs. The material was weak, grayish green, friable, and platy. The material could be textured into sandy silt that was hard, with corresponding SPT N-values of greater than 50 blows required to advance the sampler 6 inches, exhibited low plasticity, and contained fine-grained sand.

The materials encountered within our borings were consistent with geologic mapping of the area. We note that B-3 and B-7 encountered more consolidated materials, beginning at the ground surface and throughout the entire borings, than the other borings. Softer materials were encountered from the ground surface to depths greater than 20 feet in other parts of the site.

Groundwater Conditions

Static groundwater was not directly measured in our borings due to the mud-rotary drilling techniques used. Pore pressure dissipation testing in CPT-1 indicates groundwater may be present at a depth of approximately 7 feet bgs at that location. Based on a review of regional groundwater logs available from the Washington State Department of Ecology, we anticipate that the static groundwater level is present at a depth of less than 10 feet bgs.⁵ Please note that groundwater levels can fluctuate during the year depending on climate, irrigation season, extended periods of precipitation, drought, and other factors.

CLOSING

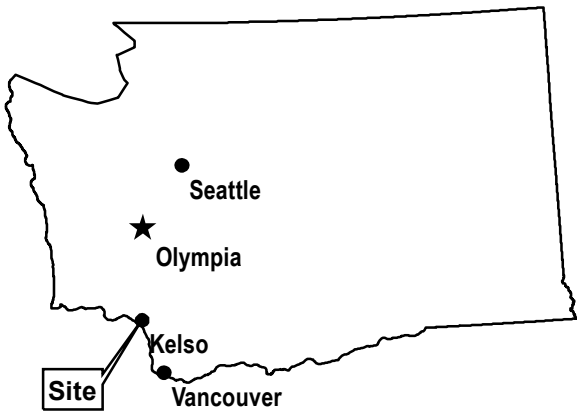
Please feel free to contact Ryan White at 503.539.5028 or ryan.white@pbsusa.com with any questions or comments.

Sincerely,

Ryan White, PE, GE (OR)
Principal Geotechnical Engineer

⁵ Washington State Department of Ecology. (2020). Well Log Records, accessed March 2020 from website: <https://fortress.wa.gov/ecy/waterresources/map/WCLWebMap/textsearch.aspx>.

Attachments: Figure 1. Vicinity Map
 Figure 2. Site Plan
 Figure 3. Tectonic Setting of the Pacific Northwest
 Figure 4. Geologic Map
 Figure 5. Liquefaction Susceptibility Map
 Table A-1. Terminology Used to Describe Soil
 Table A-2. Key to Test Pit and Boring Log Symbols
 Figures A1–A7. Logs for Borings B-1 through B-7
 Figures A8–A9. Logs for CPT-1 and CPT-2
 Figure A10. Shear Wave Velocity Profile



VICINITY MAP

HUNTINGTON MIDDLE SCHOOL KELSO, WASHINGTON

DATE: JULY 2020 · PROJECT: 73400.004






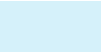
FIGURE

1

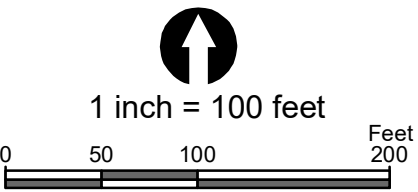
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EXPLANATION

-  B-1 - Boring name and approximate location
-  CPT-1 - CPT name and approximate location
-  5-foot elevation contour
-  Proposed Gymnasium location

SOURCES: WADNR LiDAR (2020) and Google Earth (2018)



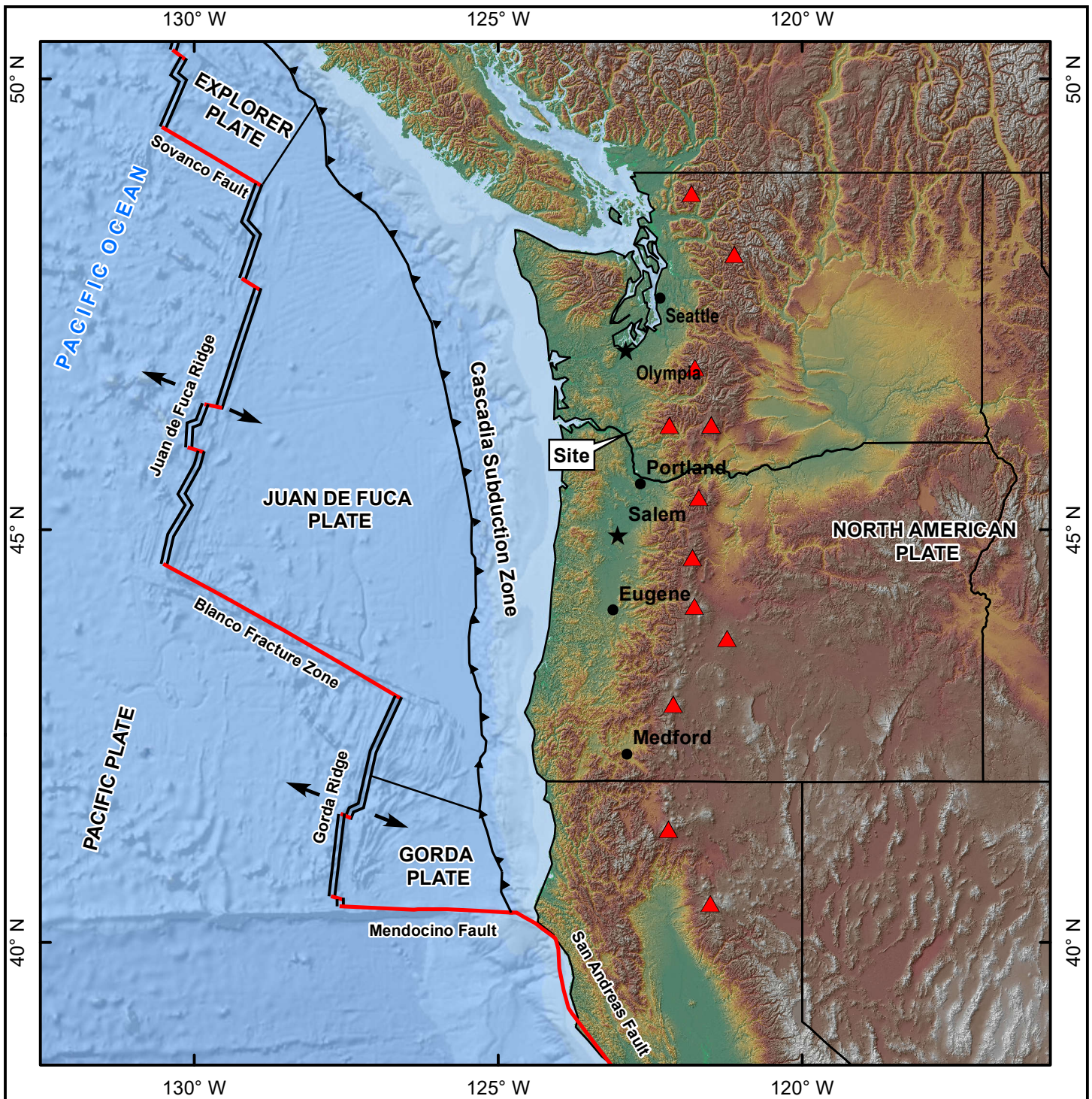
SITE PLAN
HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

DATE: JULY 2020 · PROJECT: 73400.004



FIGURE

2



EXPLANATION

- ▲ Volcano
- Transform boundary
- = Spreading ridge
- ▲ Thrust fault

Sources:

- 1) SRTM 30-meter DEM
- 2) ESRI World Oceans Basemap
- 3) USGS Tectonic Plate Boundaries

TECTONIC SETTING OF THE PACIFIC NORTHWEST

HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

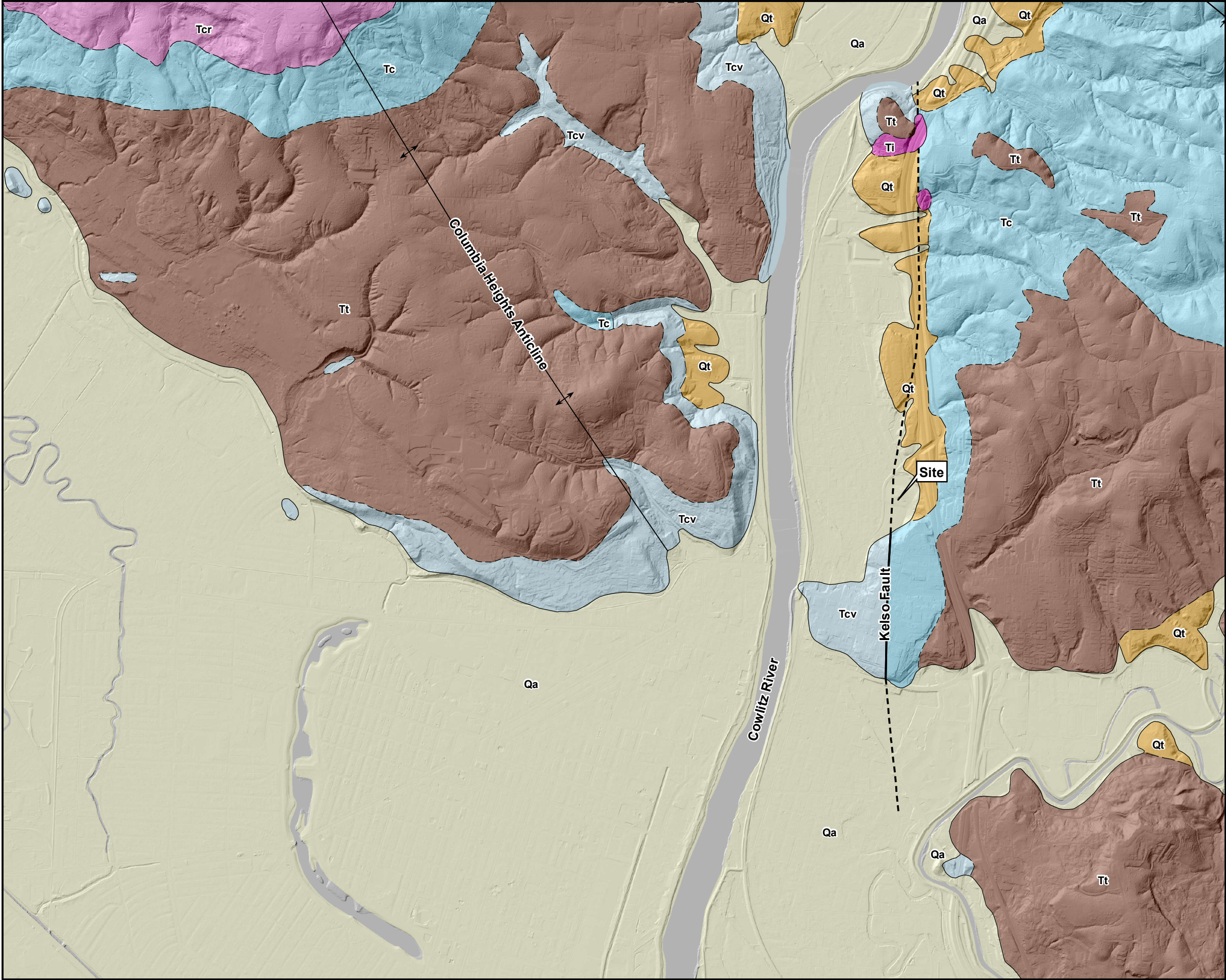
DATE: JULY 2020 · PROJECT: 73400.004



FIGURE

3

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EXPLANATION

Qa	Alluvium - sand, gravel, silt, and peat deposits along stream courses
Qls	Landslide - areas of detached and slumped bedrock and overburden
Qt	Terrace deposits - silt and fine sand along valley walls
Tt	Troutdale Formation - sedimentary rocks
Tcr	Columbia River Basalt Group - volcanic rocks
Ti	Cowlitz Formation - intrusive rocks
Tcv	Cowlitz Formation - volcanic rocks
Tc	Cowlitz Formation - sedimentary rocks

— Contact - solid where known; dashed where inferred

— Fault - solid where known; dashed where inferred

↕ Anticline with arrow indicating direction of plunge

↔ Syncline - solid where known; dashed where inferred

SOURCES: Washington Department of Natural Resources
LiDAR 2017,2010,2005 and Livingston, V.E., Jr., 1966, Geology and mineral resources of the Kelso-Cathlamet area, Cowlitz and Wahkiakum Counties, Washington: Washington Division of Mines and Geology, Bulletin 54, scale 1:24,000

1 inch = 2,000 feet

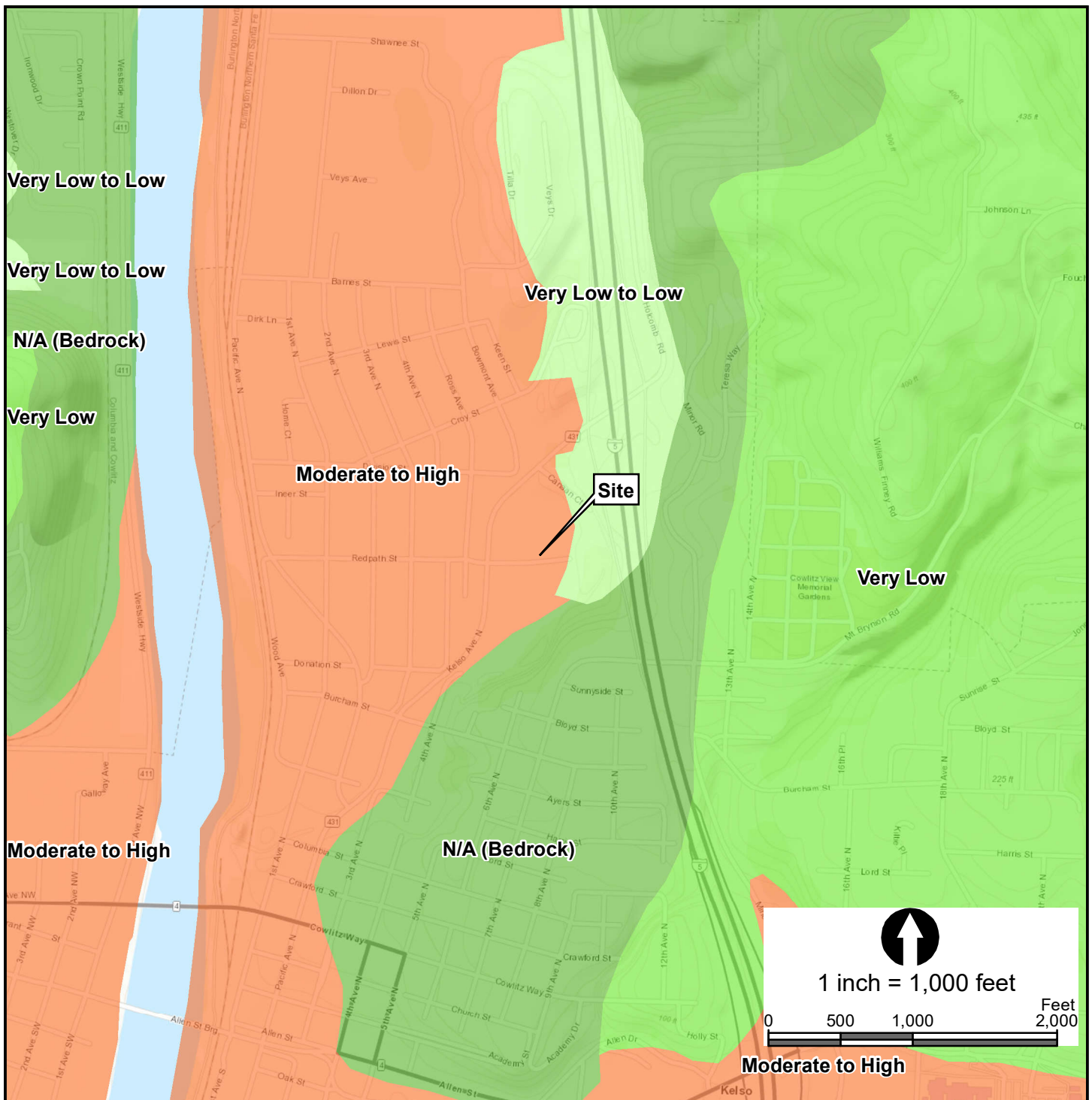
GEOLOGIC MAP

**HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON**

DATE: JULY 2020 · PROJECT: 73400.004

FIGURE

4



EXPLANATION

- Liquefaction susceptibility: Moderate to high
- Liquefaction susceptibility: Very low to low
- Liquefaction susceptibility: Very low
- Liquefaction susceptibility: Bedrock

SOURCES: Liquefaction Susceptibility Map of Cowlitz County, Washington by Palmer et al. (2004), ESRI Topographic Basemap

LIQUEFACTION SUSCEPTIBILITY MAP

HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

DATE: JULY 2020 · PROJECT: 0073400.004



FIGURE

5

Soil Descriptions

Soils exist in mixtures with varying proportions of components. The predominant soil, i.e., greater than 50 percent based on total dry weight, is the primary soil type and is capitalized in our log descriptions (SAND, GRAVEL, SILT, or CLAY). Smaller percentages of other constituents in the soil mixture are indicated by use of modifier words in general accordance with the ASTM D2488-06 Visual-Manual Procedure. "General Accordance" means that certain local and common descriptive practices may have been followed. In accordance with ASTM D2488-06, group symbols (such as GP or CH) are applied on the portion of soil passing the 3-inch (75mm) sieve based on visual examination. The following describes the use of soil names and modifying terms used to describe fine- and coarse-grained soils.

Fine-Grained Soils (50% or greater fines passing 0.075 mm, No. 200 sieve)

The primary soil type, i.e., SILT or CLAY is designated through visual-manual procedures to evaluate soil toughness, dilatency, dry strength, and plasticity. The following outlines the terminology used to describe fine-grained soils, and varies from ASTM D2488 terminology in the use of some common terms.

Primary soil NAME, Symbols, and Adjectives			Plasticity Description	Plasticity Index (PI)
SILT (ML & MH)	CLAY (CL & CH)	ORGANIC SOIL (OL & OH)		
SILT		Organic SILT	Non-plastic	0 – 3
SILT		Organic SILT	Low plasticity	4 – 10
SILT/Elastic SILT	Lean CLAY	Organic SILT/ Organic CLAY	Medium Plasticity	10 – 20
Elastic SILT	Lean/Fat CLAY	Organic CLAY	High Plasticity	20 – 40
Elastic SILT	Fat CLAY	Organic CLAY	Very Plastic	>40

Modifying terms describing secondary constituents, estimated to 5 percent increments, are applied as follows:

Description	% Composition	
With Sand	% Sand ≥ % Gravel	15% to 25% plus No. 200
With Gravel	% Sand < % Gravel	
Sandy	% Sand ≥ % Gravel	≤30% to 50% plus No. 200
Gravelly	% Sand < % Gravel	

Borderline Symbols, for example CH/MH, are used when soils are not distinctly in one category or when variable soil units contain more than one soil type. **Dual Symbols**, for example CL-ML, are used when two symbols are required in accordance with ASTM D2488.

Soil Consistency terms are applied to fine-grained, plastic soils (i.e., $PI \geq 7$). Descriptive terms are based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84, as follows. SILT soils with low to non-plastic behavior (i.e., $PI < 7$) may be classified using relative density.

Consistency Term	SPT N-value	Unconfined Compressive Strength	
		tsf	kPa
Very soft	Less than 2	Less than 0.25	Less than 24
Soft	2 – 4	0.25 – 0.5	24 – 48
Medium stiff	5 – 8	0.5 – 1.0	48 – 96
Stiff	9 – 15	1.0 – 2.0	96 – 192
Very stiff	16 – 30	2.0 – 4.0	192 – 383
Hard	Over 30	Over 4.0	Over 383

Soil Descriptions

Coarse - Grained Soils (less than 50% fines)

Coarse-grained soil descriptions, i.e., SAND or GRAVEL, are based on the portion of materials passing a 3-inch (75mm) sieve. Coarse-grained soil group symbols are applied in accordance with ASTM D2488-06 based on the degree of grading, or distribution of grain sizes of the soil. For example, well-graded sand containing a wide range of grain sizes is designated SW; poorly graded gravel, GP, contains high percentages of only certain grain sizes. Terms applied to grain sizes follow.

Material NAME	Particle Diameter	
	Inches	Millimeters
SAND (SW or SP)	0.003 – 0.19	0.075 – 4.8
GRAVEL (GW or GP)	0.19 – 3	4.8 – 75
Additional Constituents:		
Cobble	3 – 12	75 – 300
Boulder	12 – 120	300 – 3050

The primary soil type is capitalized, and the fines content in the soil are described as indicated by the following examples. Percentages are based on estimating amounts of fines, sand, and gravel to the nearest 5 percent. Other soil mixtures will have similar descriptive names.

Example: Coarse-Grained Soil Descriptions with Fines

>5% to < 15% fines (Dual Symbols)	≥15% to < 50% fines
Well graded GRAVEL with silt: GW-GM	Silty GRAVEL: GM
Poorly graded SAND with clay: SP-SC	Silty SAND: SM

Additional descriptive terminology applied to coarse-grained soils follow.

Example: Coarse-Grained Soil Descriptions with Other Coarse-Grained Constituents










Coarse-Grained Soil Containing Secondary Constituents	
With sand or with gravel	≥ 15% sand or gravel
With cobbles; with boulders	Any amount of cobbles or boulders.

Cobble and boulder deposits may include a description of the matrix soils, as defined above.

Relative Density terms are applied to granular, non-plastic soils based on direct measure or correlation to the Standard Penetration Test N-value as determined by ASTM D1586-84.

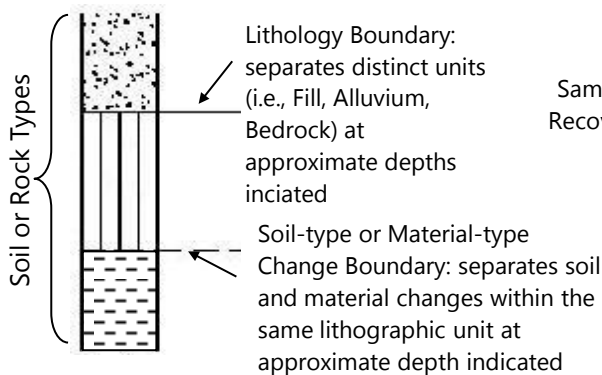
Relative Density Term	SPT N-value
Very loose	0 – 4
Loose	5 – 10
Medium dense	11 – 30
Dense	31 – 50
Very dense	> 50

SAMPLING DESCRIPTIONS

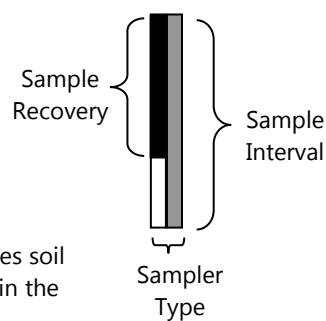
SPT Drive Sampler Standard Penetration Test ASTM D 1586	Shelby Tube Push Sampler ASTM D 1587	Specialized Drive Samplers (Details Noted on Logs)	Specialized Drill or Push Sampler (Details Noted on Logs)	Grab Sample	Rock Coring Interval	Screen (Water or Air Sampling)	Water Level During Drilling/Excavation	Water Level After Drilling/Excavation
								

LOG GRAPHICS

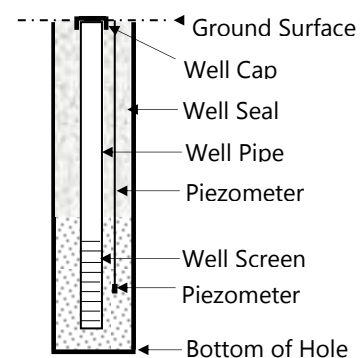
Soil and Rock



Sampling Symbols



Instrumentation Detail



Geotechnical Testing Acronym Explanations

PP	Pocket Penetrometer	HYD	Hydrometer Gradation
TOR	Torvane	SIEV	Sieve Gradation
DCP	Dynamic Cone Penetrometer	DS	Direct Shear
ATT	Atterberg Limits	DD	Dry Density
PL	Plasticity Limit	CBR	California Bearing Ratio
LL	Liquid Limit	RES	Resilient Modulus
PI	Plasticity Index	VS	Vane Shear
P200	Percent Passing US Standard No. 200 Sieve	bgs	Below ground surface
OC	Organic Content	MSL	Mean Sea Level
CON	Consolidation	HCL	Hydrochloric Acid
UC	Unconfined Compressive Strength		

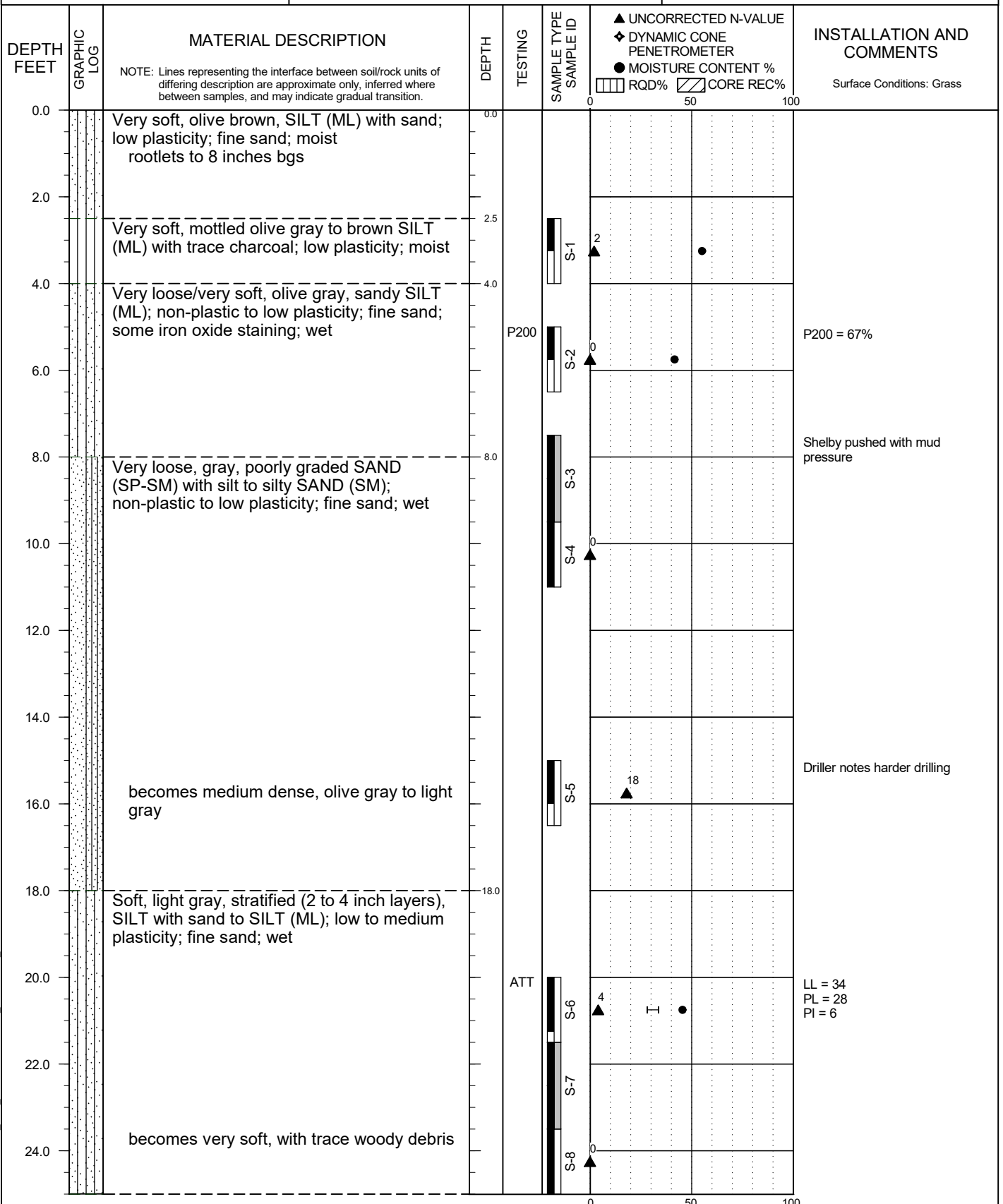


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-1

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-1 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A1
Page 1 of 3

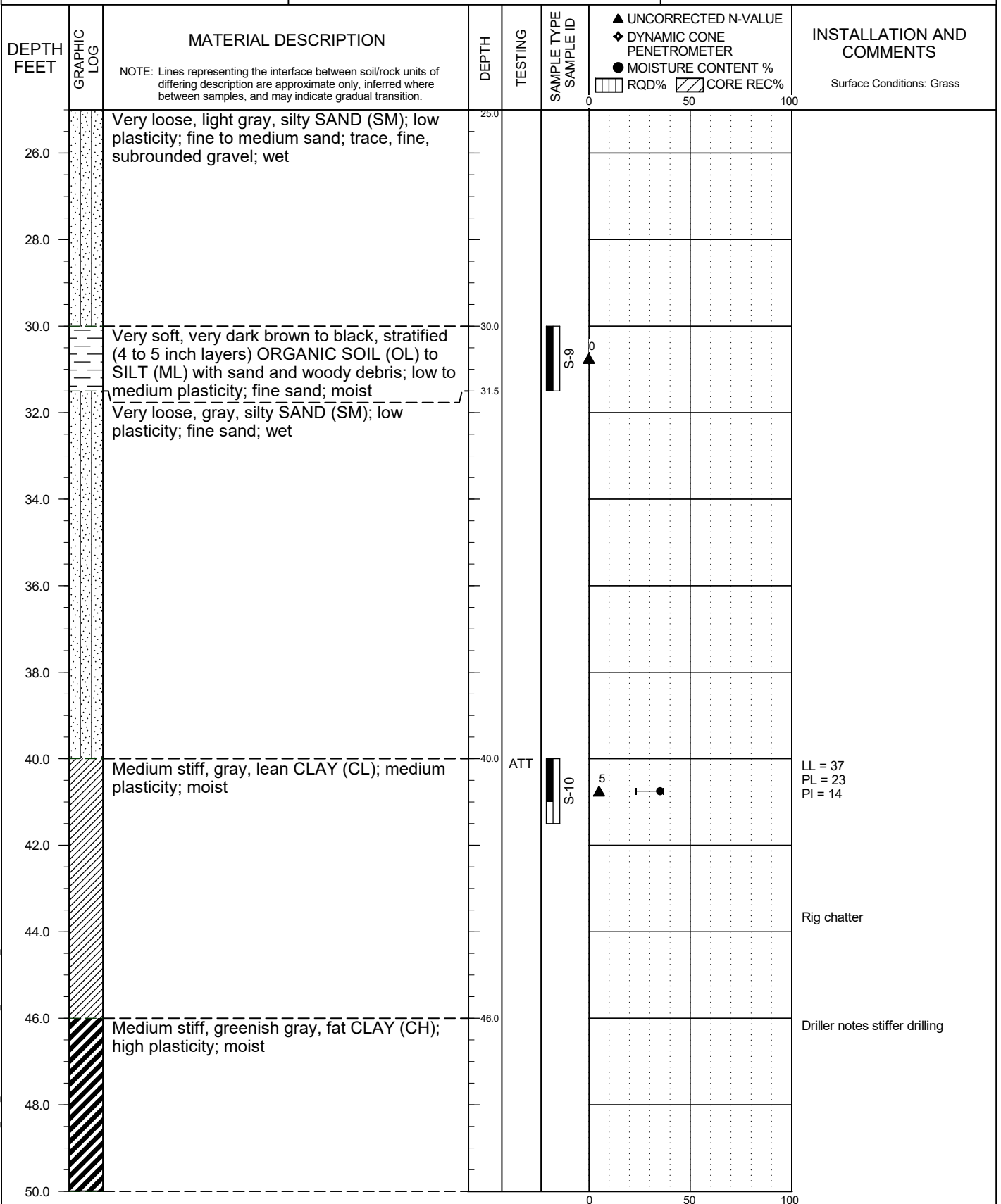


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-1
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-1 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A1
Page 2 of 3

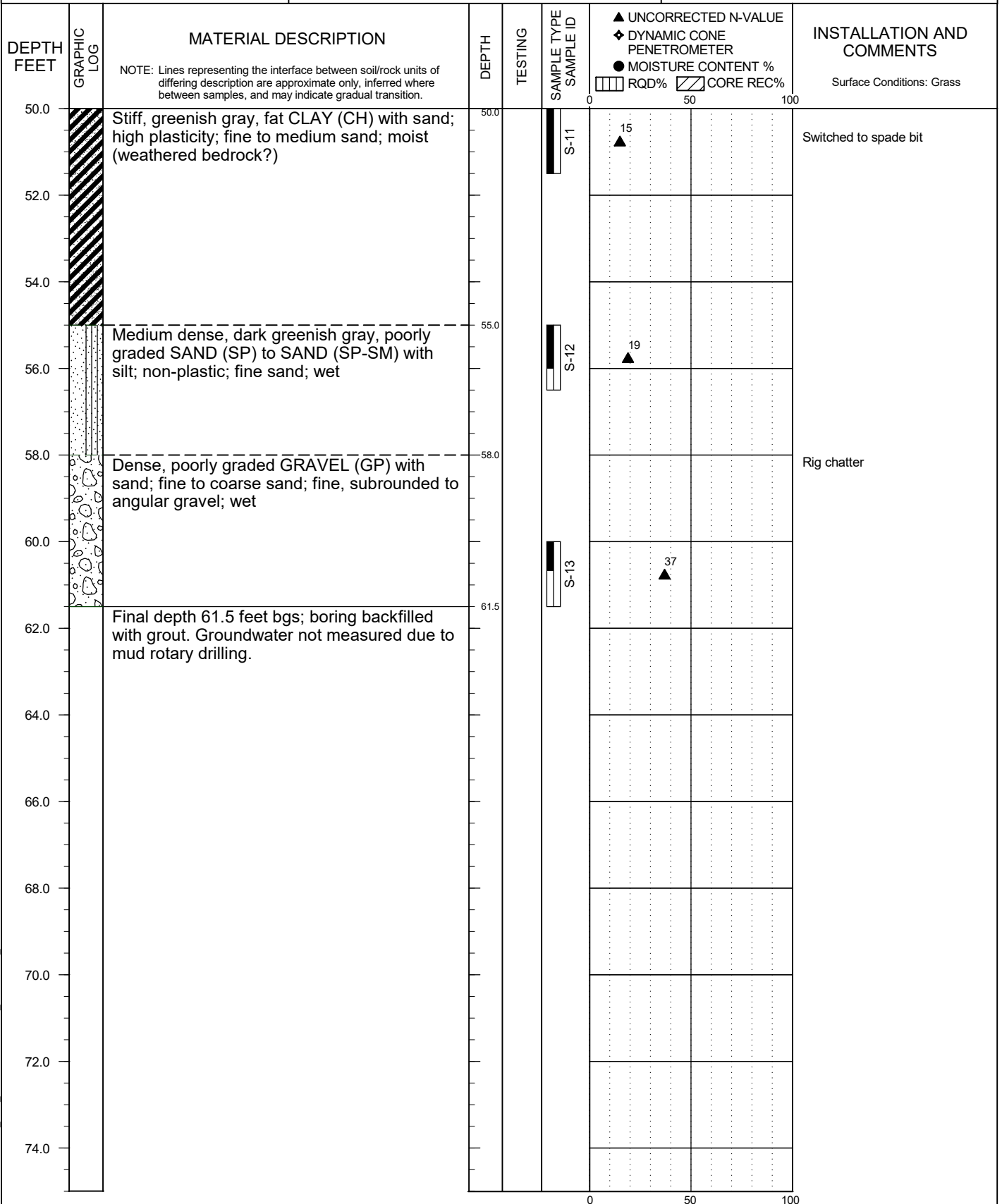


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-1
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-1 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A1
Page 3 of 3

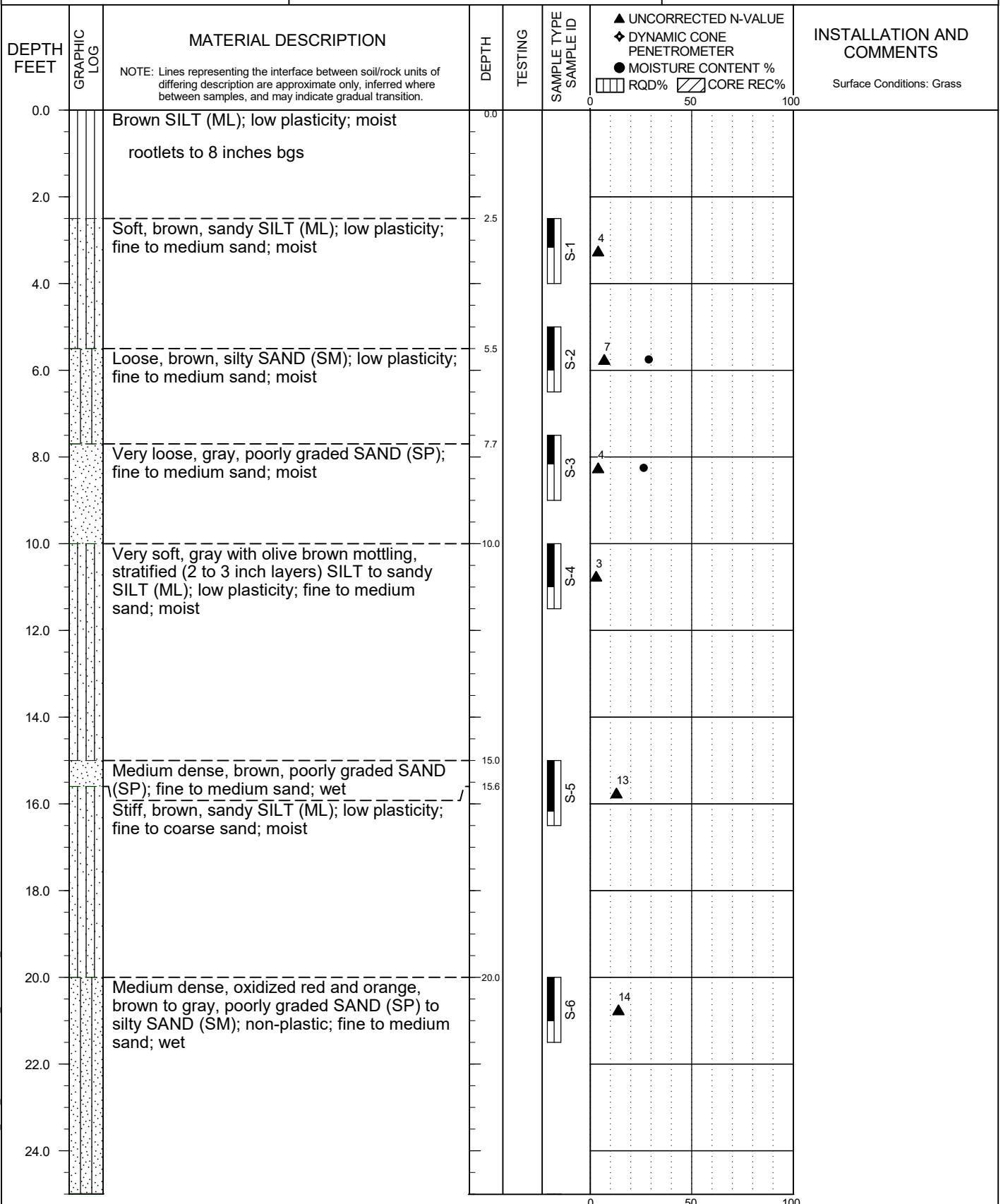


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-2

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-2 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A2
Page 1 of 2

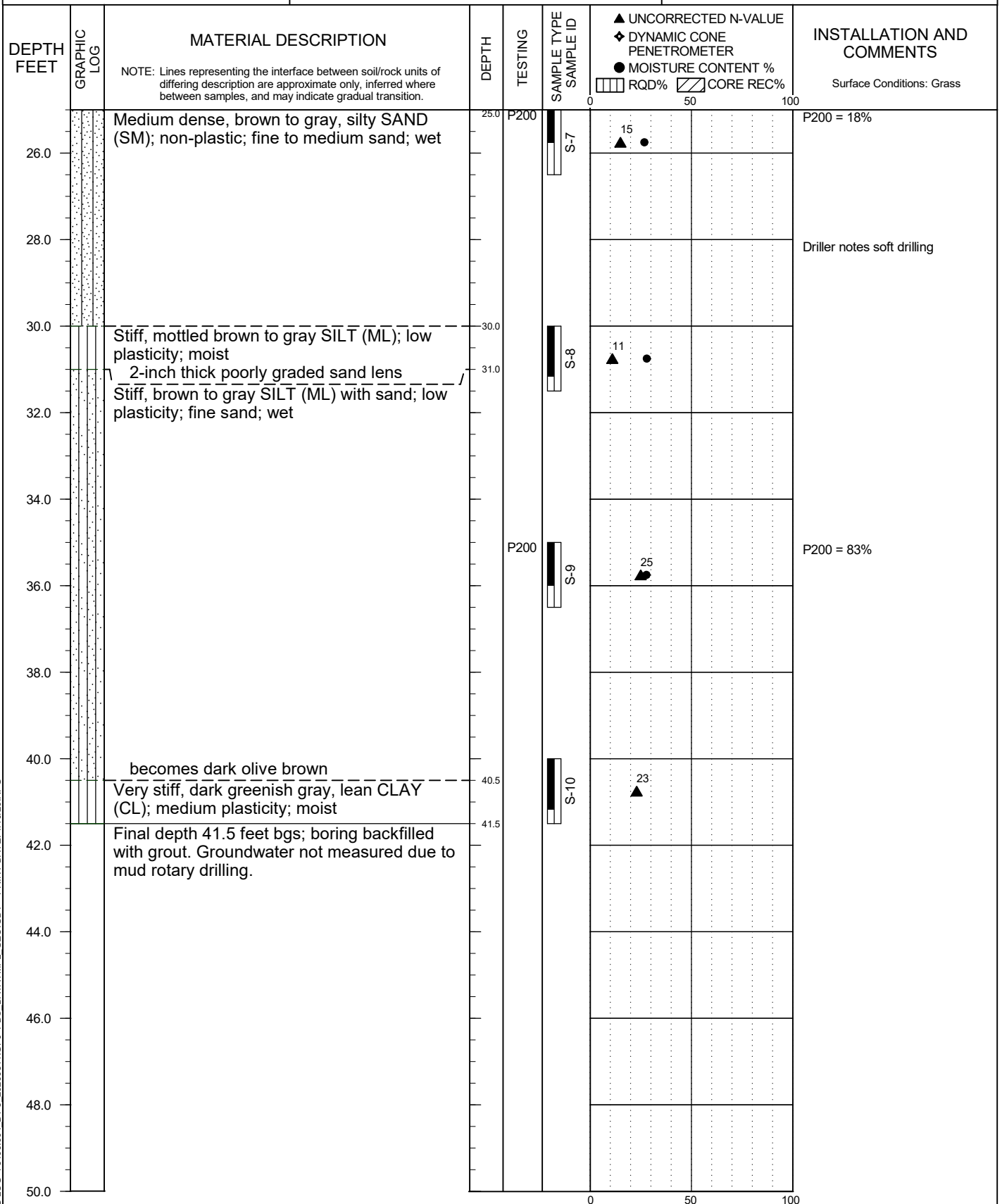


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-2
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-2 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/04/2020

FIGURE A2
Page 2 of 2

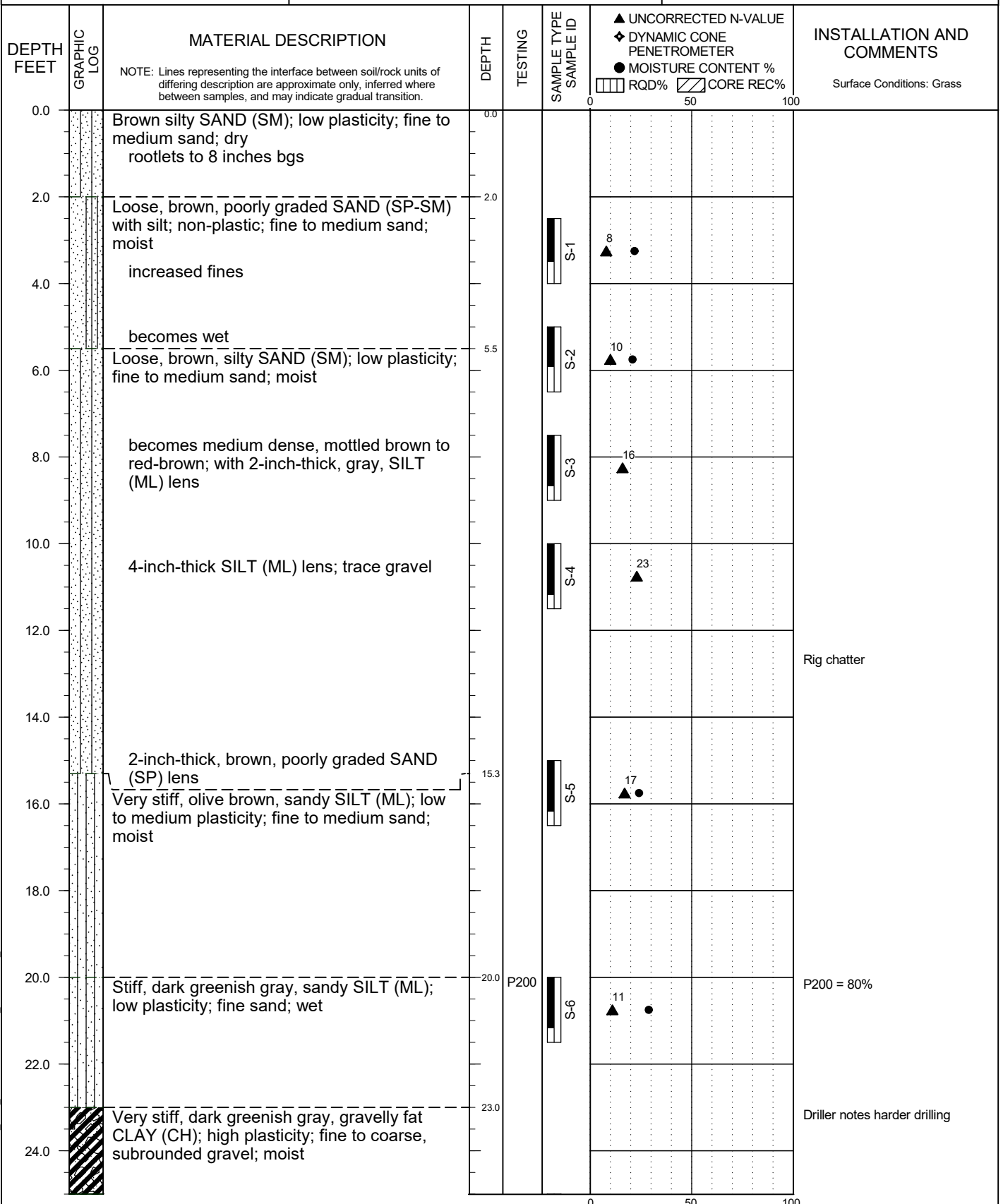


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-3

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-3 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A3
Page 1 of 2

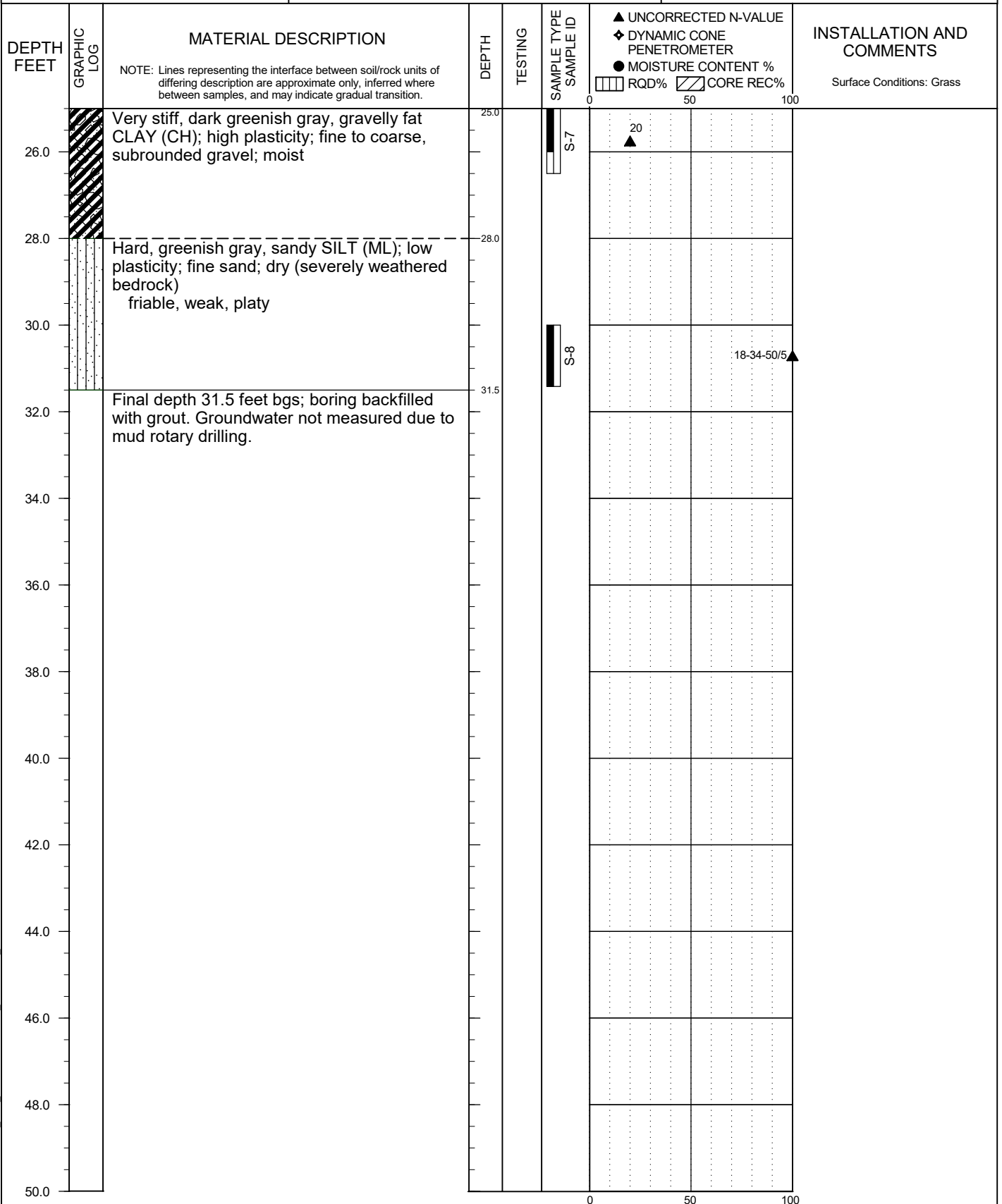


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-3
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-3 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A3
Page 2 of 2

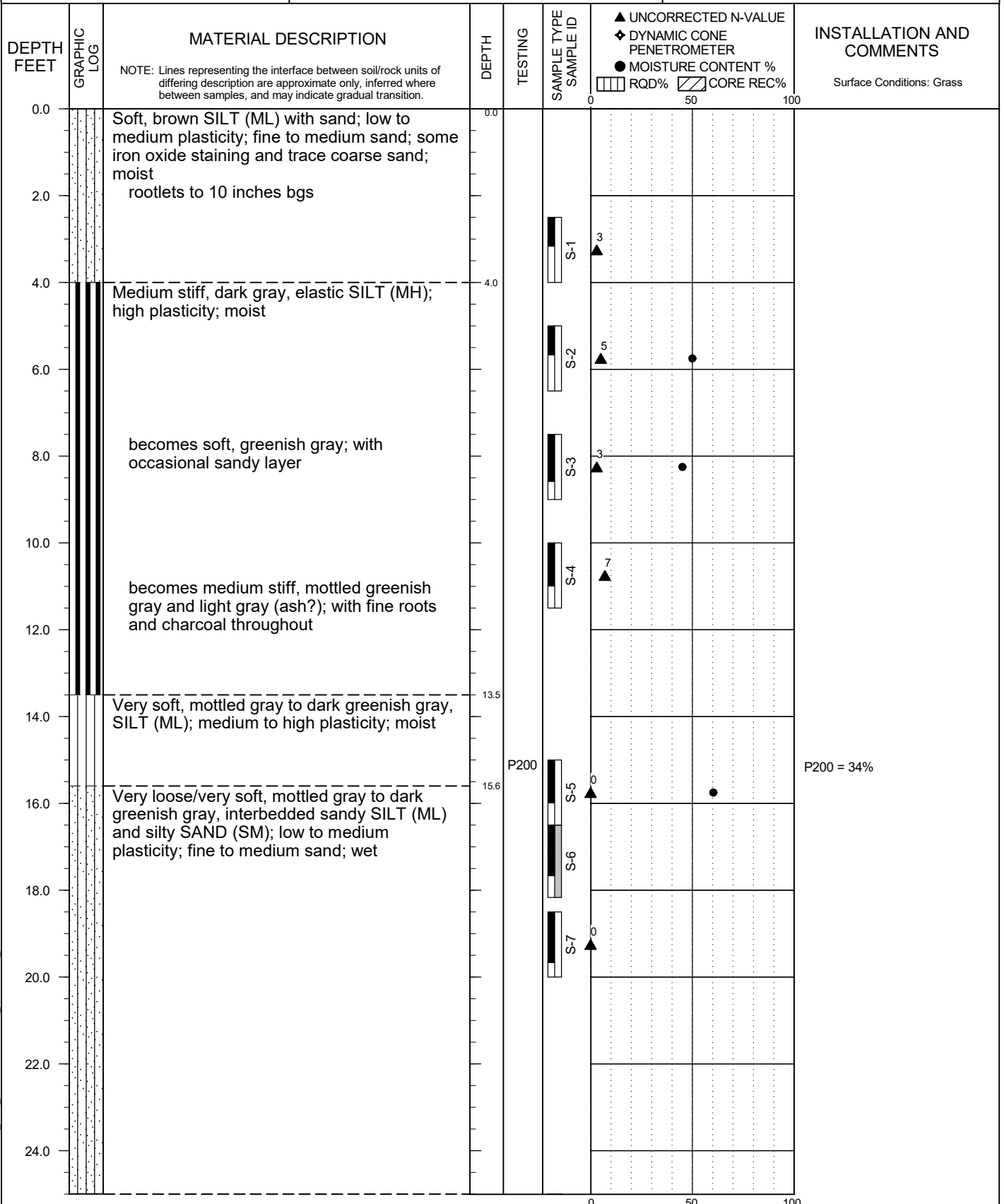


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-4

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-4 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A4
Page 1 of 2

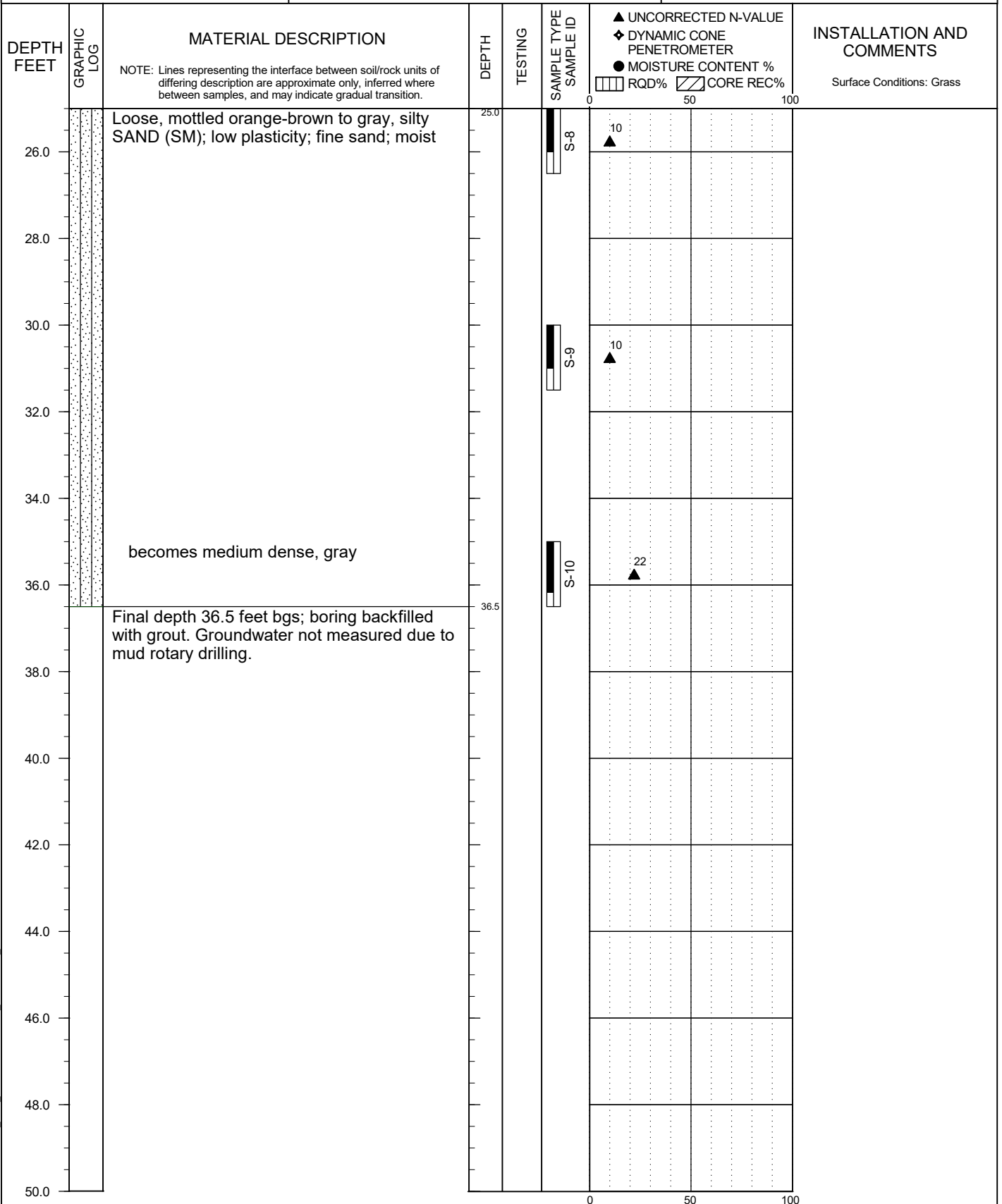


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-4
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-4 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

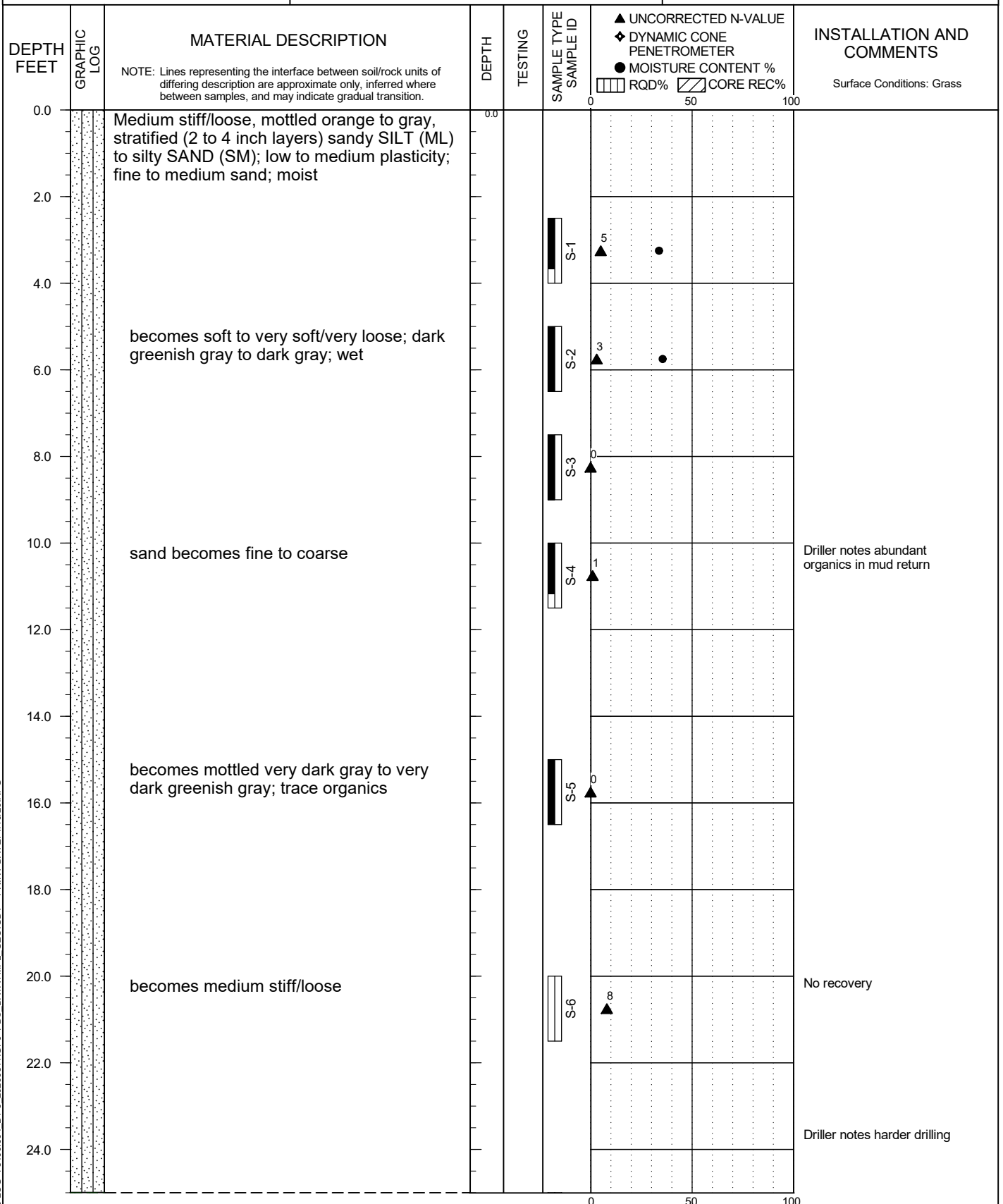


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-5

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-5 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

FIGURE A5
Page 1 of 2

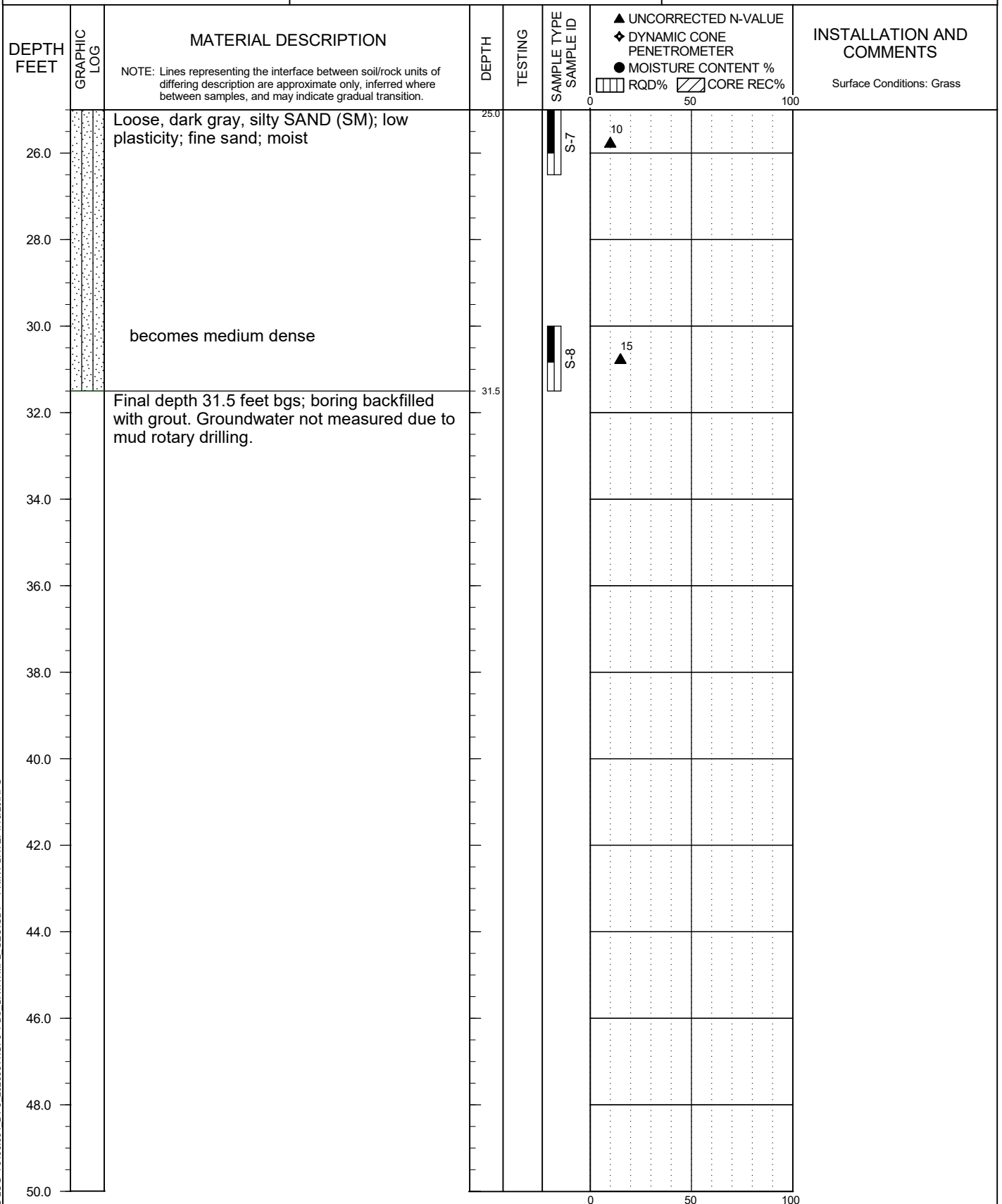


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-5
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-5 LOCATION:
(See Site Plan)



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mud Rotary - Tricone
DRILLED BY: Holt Services, Inc.
LOGGED BY: S. Cordes

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/05/2020

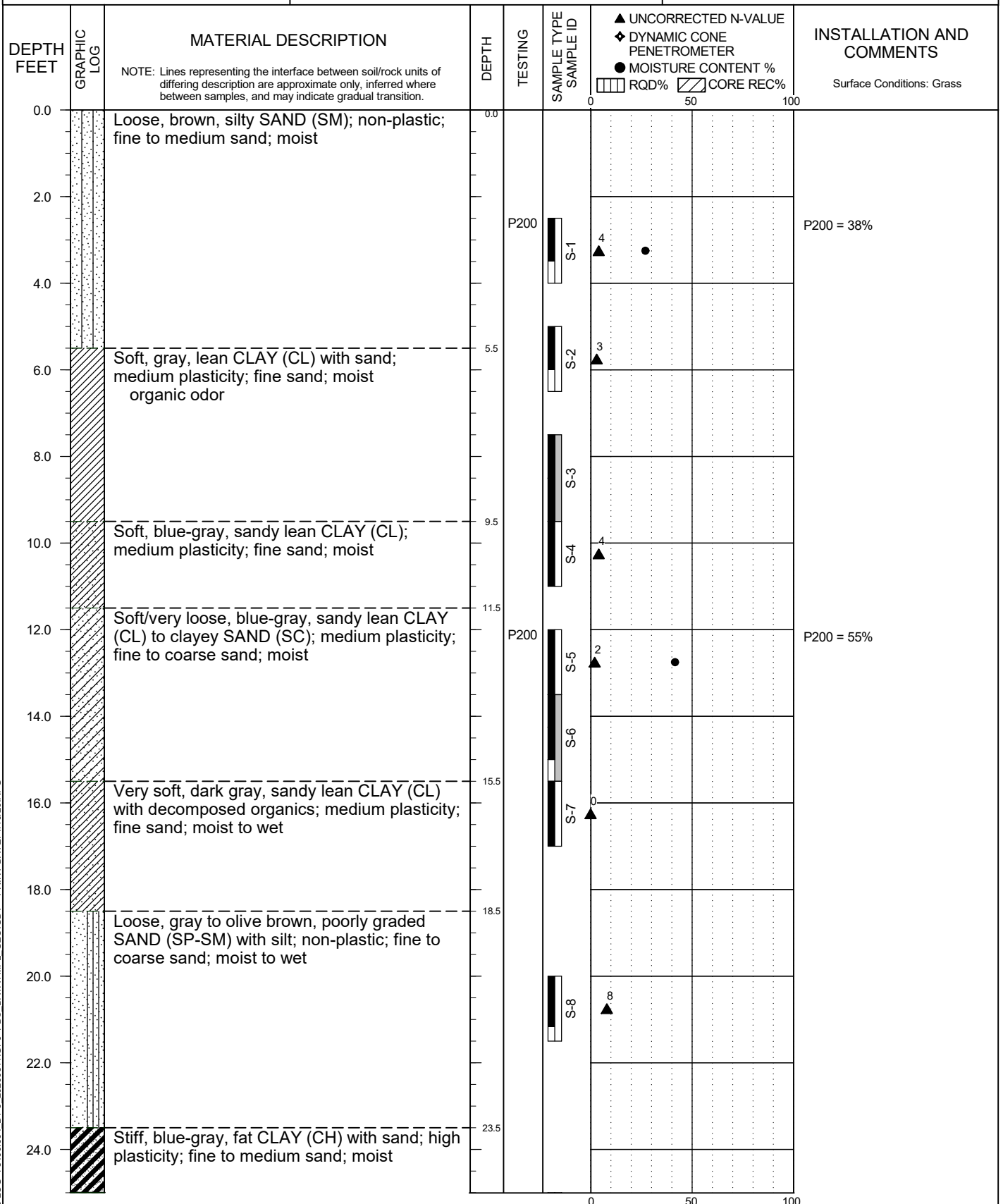


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-6

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-6 LOCATION:
46.154631, -122.903237



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020

FIGURE A6
Page 1 of 2

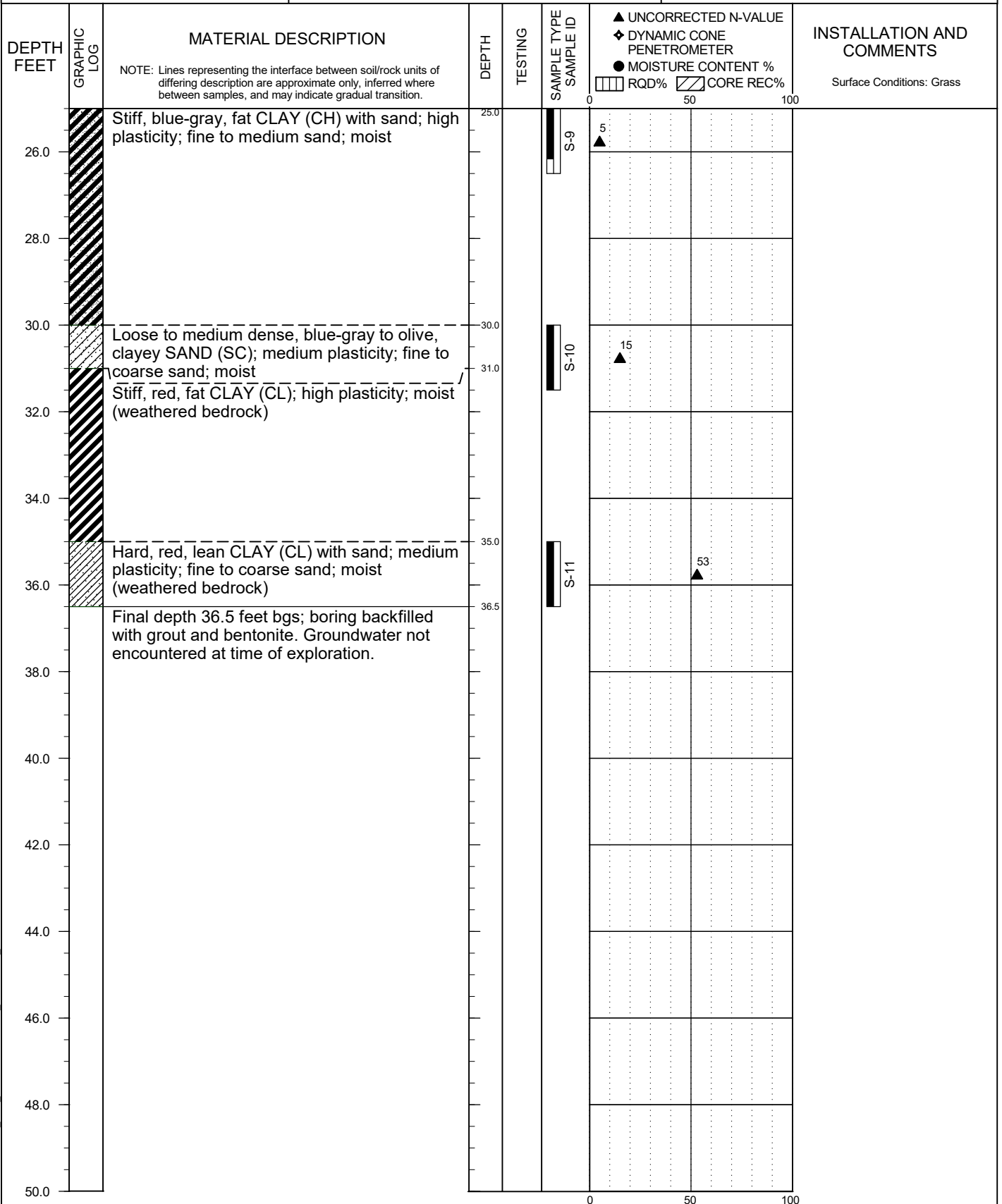


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-6
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-6 LOCATION:
46.154631, -122.903237



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020

FIGURE A6
Page 2 of 2

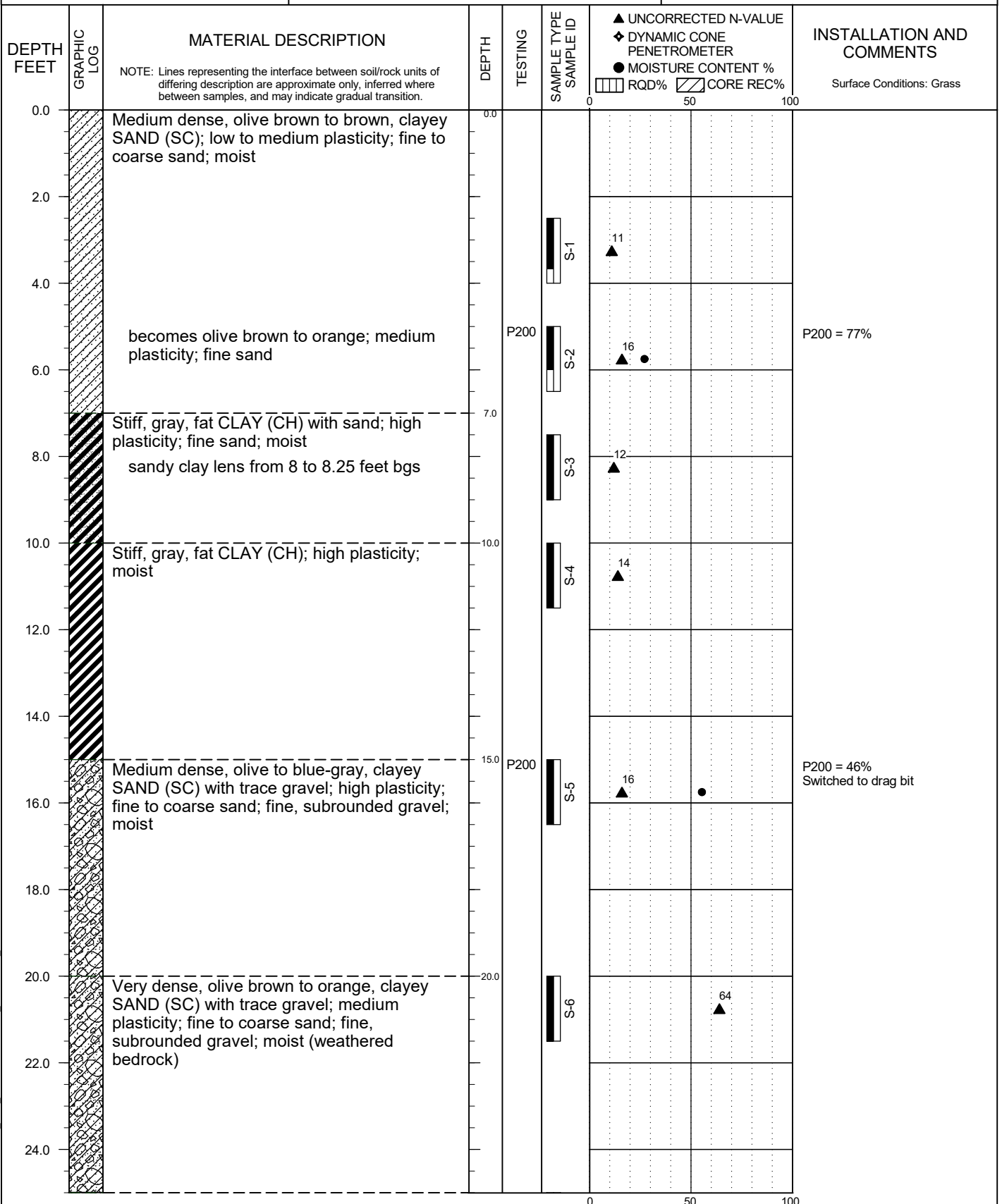


HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-7

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-7 LOCATION:
46.154277, -122.903220



BORING LOG 73400.004 B1-5_20200311.GPJ PBS DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mill Tooth/Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020

FIGURE A7
Page 1 of 2



HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

BORING B-7
(continued)

PBS PROJECT NUMBER:
73400.004

APPROX. BORING B-7 LOCATION:
46.154277, -122.903220

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION NOTE: Lines representing the interface between soil/rock units of differing description are approximate only, inferred where between samples, and may indicate gradual transition.	DEPTH	TESTING	SAMPLE TYPE SAMPLE ID	▲ UNCORRECTED N-VALUE ◆ DYNAMIC CONE PENETROMETER ● MOISTURE CONTENT % RQD% CORE REC%	INSTALLATION AND COMMENTS Surface Conditions: Grass
26.0		Very dense, blue-gray, olive, and orange, clayey SAND (SC); low plasticity; fine to medium sand; moist (weathered bedrock)	25.0		S-7	28-45-50/5▲	
		Final depth 26.5 feet bgs; boring backfilled with grout and bentonite. Groundwater not encountered at time of exploration.	26.5				
28.0							
30.0							
32.0							
34.0							
36.0							
38.0							
40.0							
42.0							
44.0							
46.0							
48.0							
50.0							

BORING LOG 73400.004 B1-5_20200311.GPJ PBS_DATATMPL GEO.GDT PRINT DATE: 4/10/20.RPG

DRILLING METHOD: Mill Tooth/Drag Bit
DRILLED BY: Holt Services, Inc.
LOGGED BY: D. Eibert

BIT DIAMETER: 4 7/8 inches
HAMMER EFFICIENCY PERCENT: 89.9
LOGGING COMPLETED: 3/24/2020



PBS Engineering and Environmental, Inc.
4412 SW Corbett Avenue
Portland, Oregon 97239
www.pbsenv.com

CPT-1

Total depth: 58.89 ft, Date: 2/28/2020

Project: 73400.004 Huntington Middle School

Location: Kelso, Washington

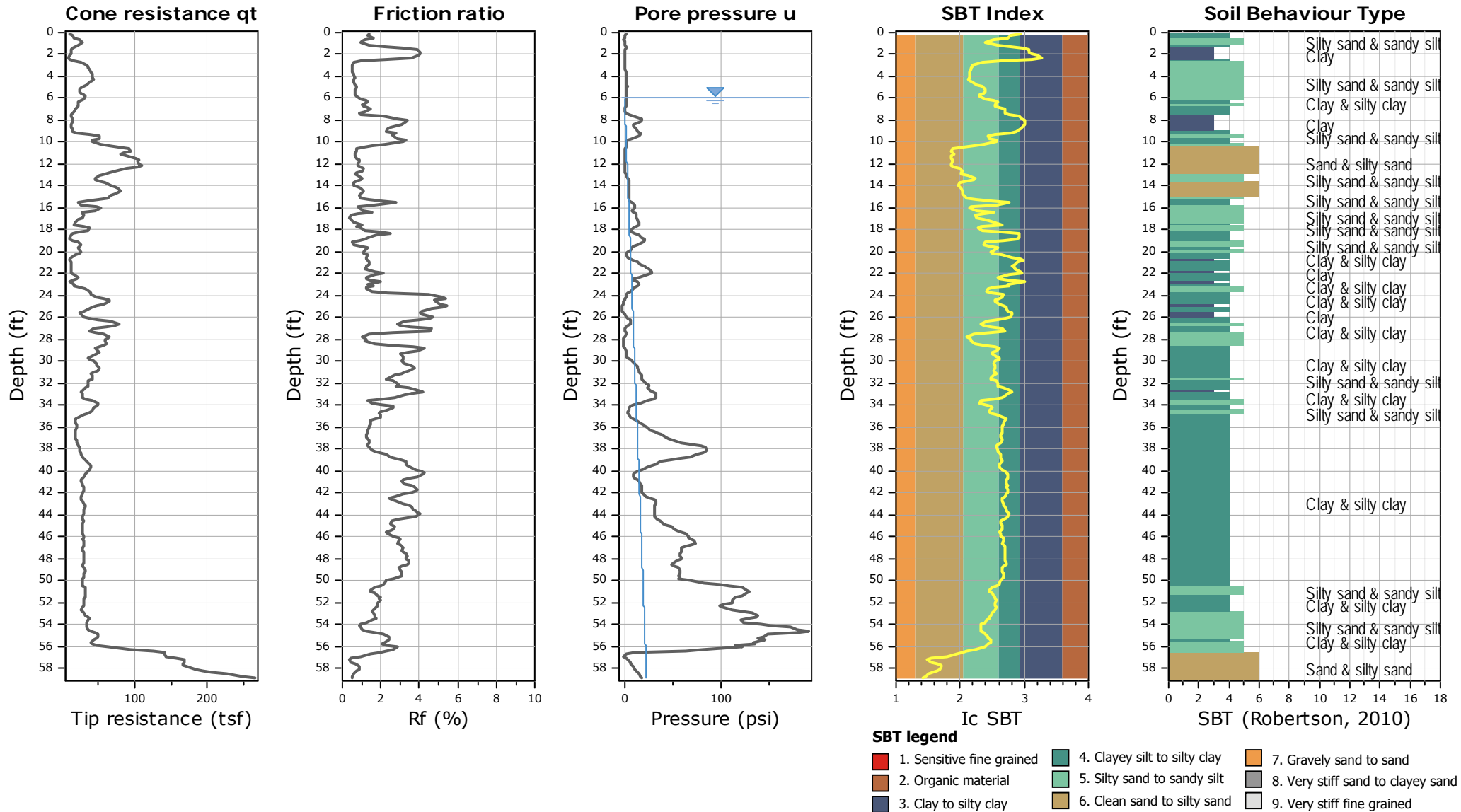


FIGURE A8



Project: 73400.004 Huntington Middle School

Location: Kelso, Washington

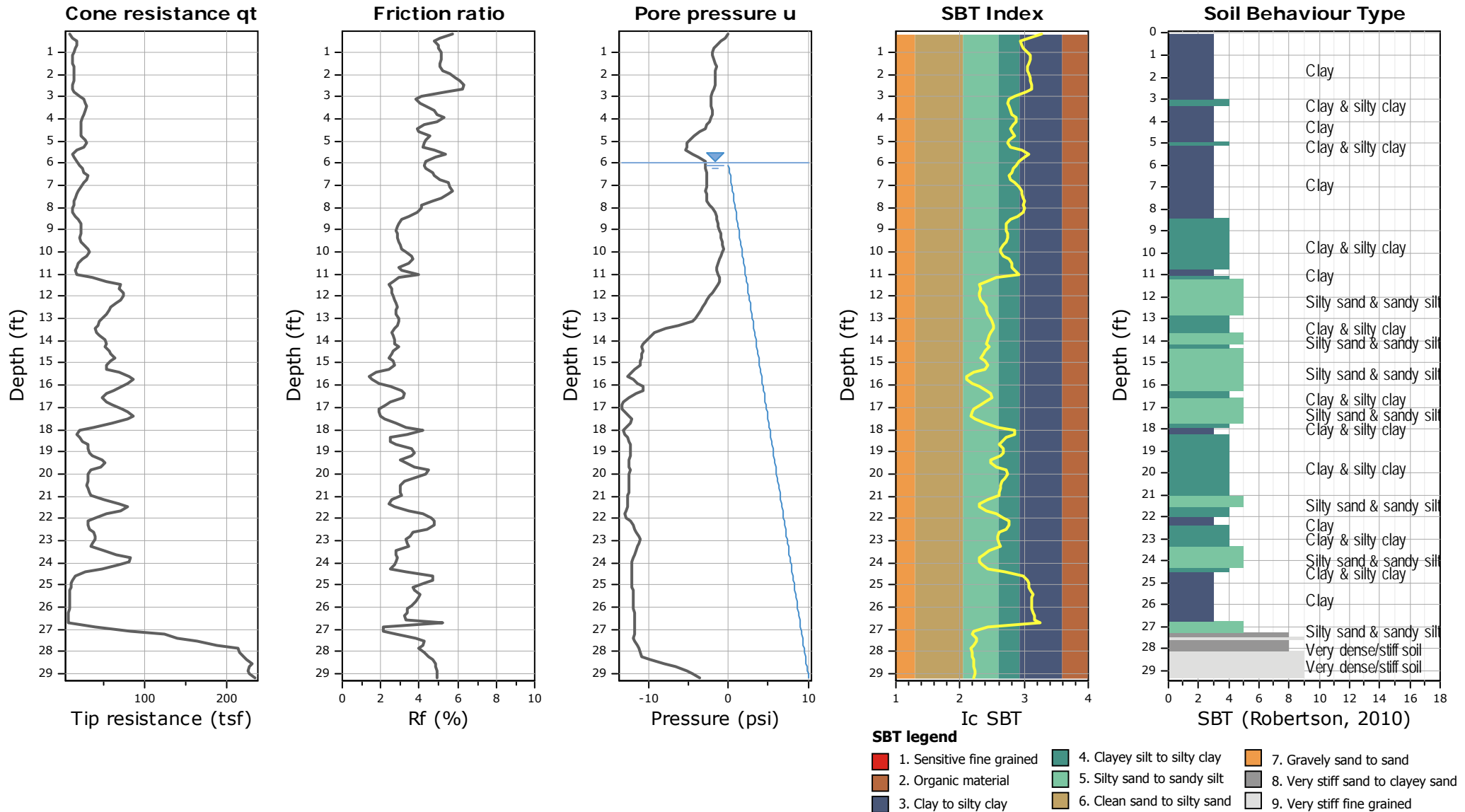
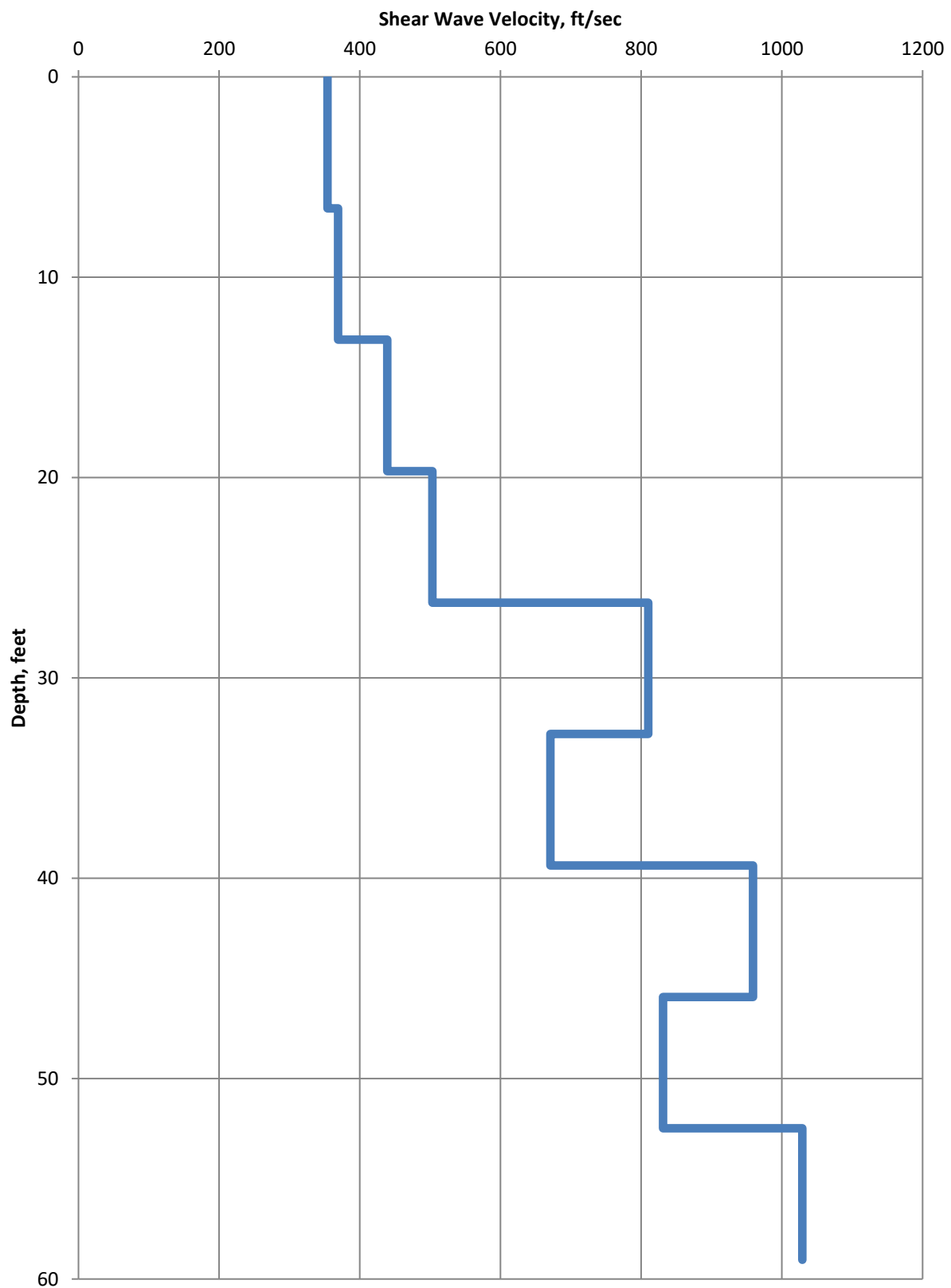


FIGURE A9



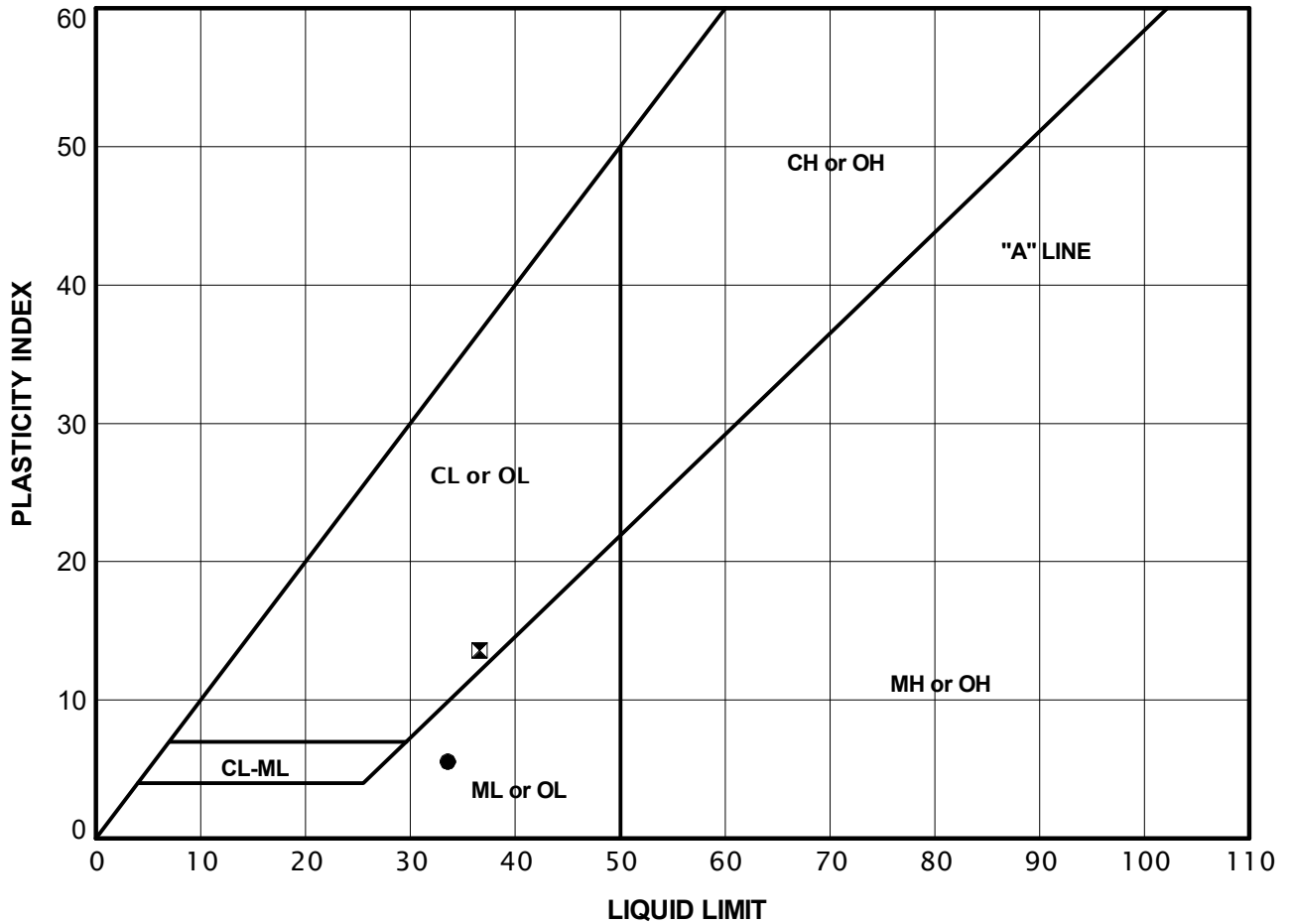
SHEAR WAVE VELOCITY PROFILE
HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

APR 2020
73400.004

FIGURE

A10

TEST METHOD: ASTM D4318



KEY	EXPLORATION NUMBER	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	NATURAL MOISTURE CONTENT (PERCENT)	PERCENT PASSING NO. 40 SIEVE (PERCENT)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
●	B-1	S-6	20.0	45.4	NA	34	28	6
⊠	B-1	S-10	40.0	35.0	NA	37	23	14

FIGURE B1
Page 1 of 1



SUMMARY OF LABORATORY DATA

HUNTINGTON MIDDLE SCHOOL
KELSO, WASHINGTON

PBS PROJECT NUMBER:
73400.004

SAMPLE INFORMATION

MOISTURE
CONTENT
(PERCENT)

DRY
DENSITY
(PCF)

SIEVE

ATTERBERG LIMITS

EXPLORATION
NUMBER

SAMPLE
NUMBER

SAMPLE
DEPTH
(FEET)

ELEVATION
(FEET)

GRAVEL
(PERCENT)

SAND
(PERCENT)

P200
(PERCENT)

LIQUID
LIMIT
(PERCENT)

PLASTIC
LIMIT
(PERCENT)

PLASTICITY
INDEX
(PERCENT)

B-1

S-1

2.5

55.0

B-1

S-2

5

41.5

67

B-1

S-6

20

45.4

34

28

6

B-1

S-10

40

35.0

37

23

14

B-2

S-2

5

28.8

B-2

S-3

7.5

26.3

B-2

S-7

25

26.7

18

B-2

S-8

30

27.9

B-2

S-9

35

27.7

83

B-3

S-1

2.5

21.8

B-3

S-2

5

20.8

B-3

S-5

15

24.0

B-3

S-6

20

28.8

80

B-4

S-2

5

49.9

B-4

S-3

7.5

45.0

B-4

S-5

15

60.2

34

B-5

S-1

2.5

33.6

B-5

S-2

5

35.4

B-6

S-1

2.5

26.9

38

B-6

S-5

12

41.5

55

B-7

S-2

5

27.0

77

B-7

S-5

15

55.3

46

KELSO SCHOOL DISTRICT # 458
The Kelso School District Business Office
601 Crawford Street
Kelso, WA 98626

**Project No. 2021-XX - Huntington Middle School Modernization and Auxiliary
Gym and Vestibule Addition**

BASE BID AND ALTERNATES BID PROPOSAL FORM (Part 1)

(BASE BID AND ALTERNATES BID DUE 3:00 P.M., Wednesday, July 14, 2021)

1.01 To: KELSO SCHOOL DISTRICT # 458
The Kelso School District Business Office
601 Crawford Street
Kelso, WA 98626
ATTN: Scott Westlund

1.02 SUBMITTED BY (BIDDER TO ENTER NAME AND ADDRESS):

- A. BIDDER'S NAME _____
- B. ADDRESS: _____
- C. CITY, STATE, ZIP: _____

1.03 OFFER:

Having carefully examined the Project Manual and the Drawings entitled Huntington Middle School, as well as the premises and conditions affecting the Work, the undersigned represents that it has the personnel, qualifications, expertise and means to complete the Work in a timely manner and proposes to furnish all labor, equipment, and materials to perform the Base Bid Work required in strict accordance with the proposed Contract Documents for the following amount:

Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in figures shall govern.

2.01 THE BASE BID AMOUNT INCLUDES ANTICIPATED UNIT PRICE WORK (SEE SECTION 012400) AND ALL OTHER WORK SHOWN ON THE DRAWINGS AND SPECIFIED IN THE BIDDING AND CONTRACT DOCUMENTS

TOTAL BASE BID:

DOLLARS (\$ _____)

2.02 UNIT PRICES:

The Base Bid includes amounts calculated based on multiplying both of the following Unit Prices by the estimated quantities set forth in the Contract Documents (refer to sheets C401, H100, H101, H102, and Hazmat Report dated 3/29/2021). See Section 012400 for more information.

Unit Price No. 1 (Authorized Overexcavation): \$ _____ per cubic yard in place

Unit Price No. 2 (Authorized Overexcavation Fill): \$ _____ per cubic yard in place

Unit Price No. 3 (Authorized Vinyl Tile Removal): \$ _____ per square foot

Unit Price No. 4 (Authorized Vinyl Sheeting Removal): \$ _____ per square foot

Unit Price No. 3 (Authorized TSI Pipe Removal): \$ _____ per linear foot

2.03 OVERHEAD AND PROFIT:

All of the above bid prices include overhead and profit.

2.04 SALES TAX:

None of the above bid prices include State, County, or City Sales Tax.

2.05 TRENCH EXCAVATION SAFETY SYSTEM INCLUDED ABOVE:

Included in the above Base Bid is an amount for Trench Excavation Safety for any trenching exceeding a depth of four feet. (In accordance with Chapter 39.04 RCW and WAC 296-155-650, all costs for adequate trench safety systems are required to be identified in this Bid.) The Bidder certifies that the following amount is included in the Base Bid for Trench Excavation Safety Provisions. **If no** amount is entered, the Owner will presume that the Bidder represents that there are no Trench Excavation Safety costs for this Project.

Trench Safety System DOLLARS (\$) _____)

3.01 ALTERNATE BIDS:

The undersigned proposes to perform the Alternate Bid Work called for in the following Alternates, as shown on the Drawings and further described in Section 012300 of the Project Manual, for the following additions to the Base Bid, which include all costs associated with the Alternate, including overhead and profit:

<u>Additive/Deductive Alternates</u>		Add/Deduct
Alternate Bid No. A1:	New Exterior Window Openings	\$ _____
Alternate Bid No. A2:	Boiler Room Ceiling	\$ _____
Alternate Bid No. A3:	Power at Classroom Exterior Walls	\$ _____
Alternate Bid No. A4:	Existing Gymnasium A/V System	\$ _____
Alternate Bid No. A5:	Electrical/Low Voltage Work at Shop, Fieldhouse and Portables	\$ _____
Alternate Bid No. A6:	Existing Gym Scoreboard and Shot Clock	\$ _____
Alternate Bid No. A7:	Exterior Electronic Reader Board	\$ _____
Alternate Bid No. A8:	Theatrical Lighting at Stage	\$ _____
Alternate Bid No. A9:	Cyclorama and Stage Curtains	\$ _____
Alternate Bid No. A10:	Ceiling Diffusing Panels at Music Room	\$ _____
Alternate Bid No. A11:	Wall Acoustic Panels at Cafeteria	\$ _____
Alternate Bid No. A12:	VWC Graphics	\$ _____
Alternate Bid No. A13:	Delete Air Conditioning	\$ _____

3.02 OVERHEAD AND PROFIT:

All of the above Alternate bid prices include overhead and profit.

3.03 SALES TAX:

None of the above Alternate bid prices includes State, County, or City Sales Tax that will be paid on the Contract Sum.

4.01 REINSTATEMENT OF ALTERNATE BIDS:

The undersigned agrees that the Owner has the right to reinstate, at the bid price, any or all of the Alternate Bids not originally incorporated into the Contract, provided the Owner so notifies the undersigned within forty-five (45) calendar days after the date of Contract execution, or such longer period identified in the Bidding Documents.

5.01 SUBCONTRACTOR LISTING:

THE BIDDER SHALL LIST SUBCONTRACTORS ON THE SUBCONTRACTOR PROPOSAL FORM (PART 2). IF SUBCONTRACTORS VARY WITH BID ALTERNATES, THE BIDDER MUST SO INDICATE ON THE SUBCONTRACTOR PROPOSAL FORM.

6.01 CONTRACT, BOND, INSURANCE CERTIFICATES:

If the undersigned is notified of the acceptance of this Bid within forty-five (45) calendar days after the time set for opening of bids (the "Bid Date"), or such longer period identified in the Bidding Documents, it agrees to execute and deliver to the Owner the Agreement Between Owner and Contractor in the form provided by the Owner for a compensation computed from the above sum and any Alternates selected by the Owner and to furnish the bond, insurance certificates and other documents as required by the Contract Documents within ten (10) days after issuance of the Letter of Intent to Award a Contract.

6.02 TIME OF COMPLETION:

The undersigned agrees, if awarded the Contract, to achieve Substantial Completion of the Work as described in the Standard Form of Agreement Between the Owner and Contractor, AIA Document A101-2017.

6.03 LIQUIDATED DAMAGES:

The Bidder, by submitting its Bid, represents that the liquidated damages specified in the Contract Documents are a reasonable estimate of the costs and damages to the Owner that would be incurred if the Contractor fails to achieve Substantial Completion within the Contract Time.

6.04 BID SECURITY:

5% of the Base Bid

The undersigned further agrees that the Bid security accompanying this Bid shall be left in escrow with the Owner. The Bid security constitutes a pledge that the Bidder will, if issued a Letter of Intent to Award, enter into the Contract with the Owner on the form provided and on the terms stated in its Bid and will furnish the payment and performance bonds, certificates of insurance, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail or refuse to furnish such documents, the amount of the Bid security shall be forfeited to the Owner as liquidated damages, and not as a penalty.

6.01. APPRENTICES

The undersigned understands that, pursuant to RCW 39.04.320, the Contractor will be required to achieve apprentice participation of at least fifteen percent (15%) of the total construction labor hours and that further information on this requirement is contained in the statute and the Contract Documents.

7.01. ADDENDA:

Receipt of the following addenda is hereby acknowledged and all costs of the Work therefore have been included in the proposal.

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

7.02 AS A CONDITION OF SUBMITTAL OF THIS BID, THE CONTRACTOR CERTIFIES THAT:

- A. It will comply with the current King County prevailing wages pursuant to RCW 39.12. See Washington State Prevailing Wage Rates and Benefit Code Key.
- B. It is a registered contractor with RCW 18.27.
- C. It will comply with RCW 70.92, Aged and Physically Handicapped.
- D. It will comply with RCW 26A.400.330, Crimes Against Children.
- E. It has a current state unified business identifier number.
- F. It has industrial insurance coverage for its employees working in Washington as required in Title 51 RCW
- G. It has an employment security department number as required in Title 50 RCW.
- H. It has a state excise tax registration number as required in Title 82 RCW
- I. It is not disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
- J. Within the three-year period immediately preceding the Bid Date, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provisions of chapter 49.46, 49.48 or 49.52 RCW.

The undersigned certifies under penalty of perjury under the laws of the State of Washington that the foregoing representations are true and correct.

8.01 BID FORM SIGNATURES:

THE UNDERSIGNED CERTIFIES THAT THEY ARE AUTHORIZED TO BIND THE LEGAL ENTITY MAKING THIS PROPOSAL.

Date: _____

Name of Firm: _____

Bidder's Signature: _____

Bidder's Printed Name: _____

Title: _____

Street Address: _____

City: _____

State: _____ Zip Code: _____

Telephone Number: _____

STATE OF WASHINGTON CONTRACTOR'S NO: _____

FEDERAL ID NO: _____

DEPARTMENT OF LABOR & INDUSTRY REG. NO: _____

WASHINGTON STATE DEPARTMENT OF REVENUE NO: _____

8.02 NOTE: IF A BIDDER IS A CORPORATION, WRITE STATE OF INCORPORATION; AND IF A PARTNERSHIP, PROVIDE FULL NAMES AND ADDRESSES OF ALL PARTNERS BELOW.

A. (If Corporation) – State of Incorporation: _____

B. (If Partnership) – List all Partners:

1. Name: _____

a. Address: _____

2. Name: _____

a. Address: _____

3. Name: _____

a. Address: _____

END OF BASE BID AND ALTERNATES PROPOSAL FORM (PART 1)

KELSO SCHOOL DISTRICT # 458
The Kelso School District Business Office
601 Crawford Street
Kelso, WA 98626

**Project No. 2021-XX - Huntington Middle School Modernization and Auxiliary
Gym and Vestibule Addition**

SUBCONTRACTOR PROPOSAL FORM (Part 2)

(SUBCONTRACTOR PROPOSAL FORMS DUE 4:00 P.M., Wednesday, July 14, 2021)

1.01 To: KELSO SCHOOL DISTRICT # 458
The Kelso School District Business Office
601 Crawford Street
Kelso, WA 98626
ATTN: Scott Westlund

2.01 SUBCONTRACTOR LIST:

THE BIDDER SHALL NOT LIST MORE THAN ONE SUBCONTRACTOR FOR EACH CATEGORY OF WORK IDENTIFIED BELOW. (IF SUBCONTRACTORS VARY WITH BID ALTERNATES, THE BIDDER MUST SO INDICATE IN 11.02 BELOW.)

- A. If awarded the Contract for the Work, the undersigned Bidder will subcontract directly with the Subcontractors listed below for performance of the categories of the Work designated.
- B. The Bidder must list itself if it intends to perform a category of the Work itself.

FAILURE OF THE BIDDER TO SUBMIT THE NAMES OF THE FOLLOWING SUBCONTRACTORS OR TO NAME ITSELF TO PERFORM SUCH WORK WITHIN ONE HOUR OF THE PUBLISHED BID OPENING TIME SHALL RENDER THE BIDDER'S BID NONRESPONSIVE AND, THEREFORE VOID.

Category of Work	Subcontractor/Self
Heating, ventilation, and air conditioning	
Plumbing as described in RCW 18.106	
Electrical work as described in RCW 19.28	

FAILURE OF THE BIDDER TO SUBMIT THE NAMES OF THE FOLLOWING SUBCONTRACTORS OR TO NAME ITSELF TO PERFORM SUCH WORK WITHIN FORTY-EIGHT HOURS OF THE PUBLISHED BID OPENING TIME SHALL RENDER THE BIDDER'S BID NONRESPONSIVE AND, THEREFORE VOID.

Category of Work	Subcontractor/Self
Structural Steel Installer	
Rebar Installer	

- C. ALTERNATE SUBCONTRACTORS: Should the bid for an Alternate require a different Subcontractor, the Subcontractor must be identified in 11.02 below.

2.02 ALTERNATE SUBCONTRACTOR LIST:

SHOULD THE BID FOR AN ALTERNATE REQUIRE A SUBCONTRACTOR DIFFERENT FROM THE SUBCONTRACTOR LISTED IN 11.01 ABOVE, THE SUBCONTRACTOR MUST BE IDENTIFIED BELOW ALONG WITH THE AFFECTED CATEGORY OF THE WORK AND ALTERNATE NUMBER(S).

Name of Different Subcontractor for Alternate(s)	Category of Work	Alternate Number(s)

3.01 PART 2 BID FORM SIGNATURES:

THE UNDERSIGNED CERTIFIES THAT THEY ARE AUTHORIZED TO BIND THE LEGAL ENTITY MAKING THIS PROPOSAL.

Date: _____

Name of Firm: _____

Bidder's Signature: _____

Bidder's Printed Name: _____

Title: _____

Street Address: _____

City: _____

State: _____ Zip Code: _____

Telephone Number: _____

STATE OF WASHINGTON CONTRACTOR'S NO: _____

FEDERAL ID NO: _____

DEPARTMENT OF LABOR & INDUSTRY REG. NO: _____

WASHINGTON STATE DEPARTMENT OF REVENUE NO: _____

3.02 NOTE: IF A BIDDER IS A CORPORATION, WRITE STATE OF INCORPORATION; AND IF A PARTNERSHIP, GIVE FULL NAMES AND ADDRESSES OF ALL PARTNERS BELOW.

A. (If Corporation) – State of Incorporation: _____

B. (If Partnership) – List all Partners:

1. Name: _____

a. Address: _____

2. Name: _____

a. Address:_____

3. Name:_____

a. Address:_____

**END OF SUBCONTRACTOR PROPOSAL FORM
(PART 2)**

PART 1 GENERAL

1.1 SCHEDULE OF PREVAILING WAGE RATES

- A. The most current Schedule of Washington State Prevailing Wage Rates for Cowlitz is included under requirements of these Contract Documents except as amended or superseded by new current Prevailing Wage Rates, Codes, Laws, or other Governing Authorities.

1.2 REQUIREMENTS

- A. In accordance to the Washington Public Works Act, Chapter 39.12 RCW, contractors shall pay employees for each trade or occupation, performing work on this Public Works Project, not less than the minimum, current Prevailing Wage Rate and shall comply in all respects to this Act or other requirements as defined by:

Prevailing Wage Section, ESAC
Department of Labor and Industries
P.O. Box 44540
Olympia, Washington 98504-4540
Tel. (360) 902-5335

- B. Prevailing Wage Rate is defined as the hourly wage, fringe benefits, and overtime in accordance with provisions of the Washington Public Works Act (most current rules and regulations).
 - 1. Contractors must pay a wage-and-fringe benefits package to workers that is equal to or exceeds the prevailing wage & prevailing fringe benefit amounts added together.
 - 2. Contractors must observe overtime, holiday, and Code provisions that are part of the Prevailing Wage Rate.
- C. "Statement of Intent to Pay Prevailing Wages" as approved by Department of Labor and Industry's "industrial statistician" is required to be submitted from Contractor with each Application for Payment and before payment is made.
 - 1. Posting of "Statement of Intent to Pay Prevailing Wages" is required to be posted by Contractor at job site Field Office.
- D. Amount retained will be a percent of each payment, determined by Owner, as sufficient to pay any unpaid wage claims, taxes and costs as well as attorney fees, should a claim against the bond and retainage fund be filed.
 - 1. At conclusion of Project, Contractor shall submit to Owner "Affidavit of Wages Paid" as approved by Department of Industry's "industrial statistician" before Owner will release retainage and interest withheld.
- E. The Department of Labor and Industries requires a fee, to be paid at the time of submittal, for both the Intent to Pay Prevailing Wages forms and the Affidavit of Wages Paid forms. All fees required by the Department of Labor and Industries shall be paid by the Contractor.

- F. Contractor's responsibility to go on line to the LNI web page <http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/LookUp/default.asp> the day of bid and verify the prevailing wages for Cowlitz County.

END OF SECTION

DIVISION 01
GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Description of the Work.
 - 2. Contract description.
 - 3. Project Contacts.
 - 4. Work by Owner or other.
 - 5. Owner-furnished products.
 - 6. Contractor's use of site and premises.
 - 7. Future work.
 - 8. Work sequence.
 - 9. Owner occupancy.
 - 10. Permits.
 - 11. Ecological Requirements.
 - 12. Terms and Definitions.
 - 13. Specification conventions.

1.2 DESCRIPTION OF THE WORK

- A. Huntington Middle School, located at 500 Redpath St, Kelso Washington, is an existing middle school. Project scope is to include modernization of the main building (~75,000 sf on approximately 6.5 acres) mechanical, electrical, plumbing, seismic improvement, and architectural finishes. The project scope also includes an expansion of the building to the North that will add approximately 6,000 square feet to the building to house a new auxiliary gym and new main building entry. There are no anticipated building use changes at Huntington Middle School.
- B. In general, the new auxiliary gym structure is concrete slab on grade, structural masonry frame, metal joists with metal decking, insulation and a single ply roof membrane. The exterior walls are constructed of an acrylic plaster system or masonry veneer.
- C. Mechanical systems consist of rooftop air handling units with high efficiency VAV (Variable Air Volume) boxes with hydronic re-heat. Central boilers and a central chiller for heating and air conditioning. Air conditioning will be provided in all spaces except for mechanical/electrical rooms and custodial closets.
- D. Site work includes excavation, on-site drainage, paving, curbs, walks, site lighting, landscaping and irrigation system, as well as coordinated connections to existing sanitary sewer, water, power, gas, and telephone, provided by others.

1.3 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on Stipulated Price.

1.4 COMPLIANCE WITH PUBLIC WORKS STATUTORY PROVISIONS

- A. Comply with pertinent statutory provisions relating to public works.
- B. Refer to General Conditions for complete list.

1.5 PROJECT CONTACTS

- A. Owner: Kelso School District, 601 Crawford Street, Kelso WA 98626, 360.501.1900.
- B. Architect: Integrus Architecture, 117 S. Main Street, Suite 100, Seattle, WA 98104, 206.628.3137.
- C. Structural Engineer: Integrus Architecture, 117 S. Main Street, Suite 100, Seattle, WA 98104, 206.628.3137.
- D. Civil Engineer: PBS Vancouver, 415 W 6th St, Suite 601, Vancouver WA 98660, 360.567.2110.
- E. Mechanical and Electrical Engineers: Hultz | BHU, 1111 Fawcett Ave, Suite 100, Tacoma, WA 98402, 253.670.8213.

1.6 WORK BY OWNER OR OTHERS

- A. Contractor is responsible for scheduling the work, storing such equipment if requested, and coordinating related work in the Contract with installation of NIC and OFOI equipment.
- B. Contractor shall provide all preparatory work necessary for proper installation including blocking and backing, and finish work including caulking, grouting, furring, and painting adjacent surfaces as required for NIC and OFOI equipment. Confirm with Owner work to be done.
- C. Owner will employ a commissioning agent for this project.
- D. The Owner will employ a special inspector to perform the special inspections required as indicated on the drawings.

1.7 OWNER-FURNISHED PRODUCTS

- A. Items noted 'OFOI' (Owner Furnished, Owner Installed) will be furnished and installed by Owner as is appropriate to the flow of the work, and 'OFCI' (Owner Furnished, Contractor Installed) will be furnished to the Contractor by the Owner for the Contractor to install. Items noted 'NIC' (Not in Contract) are not in contract and will be provided by others.
- B. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner-reviewed Shop Drawings, Product Data, and Samples to Contractor.
 - 2. Arrange and pay for delivery to Site.
 - 3. Upon delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.
 - 6. Installation of Owner furnished equipment.

7. Installation of furnishings and furniture.
8. Stocking of supplies.

C. Contractor's Responsibilities:

1. Review Owner-reviewed Shop Drawings, Product Data, and Samples.
2. Receive and unload products at Site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install, and finish products.
4. Contractor is responsible for scheduling the work, storing such equipment if requested, and coordinating related work in the Contract with installation of NIC and OFOI equipment.
5. Contractor shall provide all preparatory work necessary for proper installation including blocking and backing, and finish work including caulking, grouting, furring, and painting adjacent surfaces as required for NIC and OFOI equipment. Confirm with Owner work to be done.
6. Repair or replace items damaged after receipt.

D. Items furnished by Owner for installation by Contractor (OFCI):

1. Refer to items noted in drawings and specifications.

1.8 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Assume full responsibility for the protection and safekeeping of tools, equipment, materials, and products under this Contract, stored on the site.
- B. Assume full responsibility for site security and safety.
- C. Provide access to and from site as required by law and by Owner.
 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
- D. Construction Operations: Limited to areas indicated on Drawings.
 1. On-Site work hours: Work shall be only performed during hours allowed by the locality.
 2. Noisy and Disruptive Operations (such as Use of Jack Hammers and Other Noisy Equipment): Not allowed in close proximity to existing building during regular hours of operation. Coordinate and schedule such operations with Owner to minimize disruptions.
 3. Provide positive means to prevent air-borne dust from dispersing into atmosphere and surrounding environment. Cover stockpiled material with tarps, wet down, and take other measures appropriate to minimize raising dust from construction operations.
- E. Utility Outages and Shutdown:
 1. Coordinate and schedule electrical and other utility outages with Owner.
 2. Outages: Allowed only at previously agreed upon times. In general, schedule outages at times when facility is not being used.
 3. At least one week before scheduled outage, submit Outage Request Plan to Architect/Engineer itemizing the dates, times, and duration of each requested outage.
- F. Sound Level Restrictions: Comply with all applicable state and local laws, ordinances, and regulations relative to noise control. Sound pressure level measured at boundary of Site shall not exceed 60 dBA.

- G. Construction Plan: Before start of construction, provide electronic file of construction plan regarding access to Work, use of Site, and utility outages for acceptance by Owner. After acceptance of plan, construction operations shall comply with accepted plan unless deviations are accepted by Owner in writing.
- H. Keep work and storage areas in a neat, clean and orderly condition at all times. Should it be necessary at any time to move materials or sheds, Contractor shall move same at his expense.
- I. Contractor is responsible for damage to existing property adjacent to the project site and at completion of all work, shall restore/return existing property to its original condition as it was prior to start of project work.
- J. Tobacco products are not permitted on grounds and construction site during the Work of this Contract.

1.9 OWNER OCCUPANCY

- A. Owner will require access to parking lot and drop-off area to west of main building, access to shop, field house and play field during entire period of construction.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.10 ECOLOGICAL REQUIREMENTS

- A. Conform to Washington State Department of Ecology and with local codes and guidelines regarding pollution control, waste reduction and recycling.
- B. Contractor is responsible for securing applicable environmental control permits from all authorities having jurisdiction over construction practices.

1.11 TERMS AND DEFINITIONS

- A. The term 'indicated' is a cross reference to details, notes or schedules on the drawings, other paragraphs or schedules in the Project Manual, and similar means of recording requirements in the contract documents.
- B. Where terms such as 'shown,' 'noted,' 'scheduled' and 'specified' are used in lieu of 'indicated,' it is for the purpose of helping the readers accomplish the cross reference and no limitation of location is intended except as specifically noted.
- C. Where not otherwise explained, terms such as 'directed,' 'requested,' 'authorized,' 'selected,' 'approved,' 'required,' 'accepted,' and 'permitted' mean 'directed by the Architect,' 'requested by the Architect,' etc. However, no such implied meaning will be interpreted to extend the Architect's responsibility into the Contractor's area of construction supervision.
- D. The meaning of the word 'approve,' where used in conjunction with Architect's response to submittals, requests, applications, inquiries, reports and claims by Contractor, will be held to limitations of Architect's responsibilities and duties as specified in the Conditions of the Contract.

In no case will 'approval' by Architect be interpreted as a release of Contractor from responsibilities to fulfill requirements of the Contract Documents.

- E. The word 'installer' is a person or entity engaged by the Contractor or his subcontractor or sub-subcontractor for the performance of a particular unit of work at the project site, including installation, erection, application and similar required operations. It is a general requirement that Installers be recognized experts in the work they are engaged to perform.
- F. The word 'provide' means to furnish and install.

1.12 SPECIFICATION CONVENTIONS

- A. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Schedule of Values.
 - 2. Application for Payment.
 - 3. Defect assessment.

1.2 SCHEDULE OF VALUES

- A. Submit electronic file to of schedule on AIA G703 - Continuation Sheet for G702.
- B. Submit Schedule of Values as electronic file to within 15 calendar days after date established in Notice to Proceed.
- C. Format: Use Table of Contents of this Project Manual. Identify each line item with number and title of major Specification Section. Also identify, Site mobilization, bonds and insurance.
- D. Provide at least one line item for each listed specification section beginning with Division 2. Coordinate applicable activities with Section 013216 - Construction Progress Schedule.
- E. Round-off line item amounts to nearest whole dollar.
- F. Include in each line item, amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by unit cost to achieve total for each item.
- G. Include within each line item, direct proportional amount of retainage and Contractor's overhead and profit.
- H. Revise schedule to list approved Change Orders with each Application for Payment.
- I. Identify "Separately Funded Work" and amounts.
- J. List separate line items for General, Mechanical, Electrical and Food Service Equipment close-out (which includes Operation and Maintenance manuals) and include the dollar amount equal to 3% of each portion of the contract.
- K. The schedule of values shall allocate at least 1% of the original Contract Sum to Commissioning of Operational Systems.
- L. For each unit of work where payment requests will be made on account of materials or equipment purchased/fabricated/delivered but not yet installed, show "separate line items" for "order and receive" and "installation" of that unit of work.

- M. Show line items of indirect costs, and margins of actual costs, only to extent such items will be individually listed in payment requests. In general, establish each item in schedule of values (and in payment requests) to be complete with its total expenses and proportionate share of general overhead and profit margin.
- N. Except as otherwise required, major cost items, which are not directly cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in schedule of values or distributed as general overhead expense, at Contractor's option.

1.3 APPLICATION FOR PAYMENT

- A. Submit electronic file to of each Application for Payment on AIA G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheet for G702.
- B. Application for Initial Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. Statement of Intent to Pay Prevailing Wages on Public Works Contract on form issued by the State of Washington, Department of Labor and Industries.
 - 2. List of subcontractors including phone numbers, business address, and contact person.
 - 3. Schedule of Values.
 - 4. Contractor's Construction Schedule (preliminary if not final).
 - 5. Products list.
 - 6. Schedule of Unit Prices, as applicable.
 - 7. Submittals Schedule (preliminary if not final).
 - 8. Initial progress report.
 - 9. Certificates of insurance and insurance policies.
 - 10. Performance and payment bonds.
 - 11. List of emergency contact information.
 - 12. Other documents as may be required in the Contract Documents.
- C. Draft Payment Application:
 - 1. Submit prior to each application of payment.
 - 2. Prepare the actual payment request after the draft amounts are reviewed and agreed to by the Architect and Owner.
- D. Application for Monthly Payment: Submit on date each month as agreed between Owner and Contractor.
 - 1. Content and Format: Use Schedule of Values for listing items in Application for Payment.
 - 2. Submit updated construction schedule with each Application for Payment.
 - 3. Payment Period: Submit at intervals stipulated in the Agreement.
 - 4. Submit submittals with transmittal letter as specified in Section 013300 - Submittal Procedures.
- E. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
 - 1. Current construction photographs specified in Section 013300 - Submittal Procedures.
 - 2. Partial release of liens from major Subcontractors and vendors.
 - 3. Record Documents as specified in Section 017000 - Execution, for review by Owner, which will be returned to Contractor.

4. Affidavits attesting to off-Site stored products.
 5. Construction Progress Schedule, revised and current as specified in Section 013300 - Submittal Procedures.
- F. Contract Retainage Value: The Owner shall pay 95% of the amount due the Contractor on account of progress payments. The remaining 5% of each payment amount shall be held as retainage until Substantial Completion at which time the retained funds will be paid to the Contractor as referenced in General Conditions Article 9 Payments and Completion for additional information. Any remaining funds will be held until final completion and will be paid to the Contractor with the Final Payment.
- G. Application at time of Substantial Completion: Show one hundred percent (100%) completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. Submit documentation that Waste Management goals (017419) have been met.
- H. Application for Final Payment:
1. Complete and submit accepted documents as required by the General Conditions of the Contract for Construction.

1.4 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Architect/Engineer, it is not practical to remove and replace the Work, Architect/Engineer will direct appropriate remedy or adjust payment.
- C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Owner.
- D. Individual Specification Sections may modify these options or may identify specific formula or percentage sum/price reduction.
- E. Authority of Architect/Engineer to assess defects.
- F. Nonpayment for Rejected Products: Payment will not be made for rejected products for any of the following reasons:
 1. Products wasted or disposed of in a manner that is not acceptable.
 2. Products determined as unacceptable before or after placement.
 3. Products not completely unloaded from transporting vehicle.
 4. Products placed beyond lines and levels of the required Work.
 5. Products remaining on hand after completion of the Work.
 6. Loading, hauling and disposing of rejected products.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements governing Alternates.
- B. General:
 - 1. Each bidder shall state in their bid, in the spaces provided on the Bid Form:
 - a. Their proposal for performing the Base Bid work.
 - b. Alternate Bid proposals described by Schedule of Alternate Bids.
 - 2. All bid prices shall include adjustments in the work of all trades as may be necessary, and shall be inclusive of all costs affected by the alternate proposal.
 - 3. Identification of Work listed below is general in nature. The Contractor shall provide all materials and associated work necessary to complete the Work of each respective described Alternate.
 - 4. The cost or credit for each Alternate is the net addition to or deduction from the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.
 - 5. Additional Alternates, published by Addenda prior to Bid Opening are subject to provisions of this Section as if included in this Section.

1.2 DEFINITIONS

- A. The Base Bid includes all work indicated in the Contract Documents and any issued Addenda for all building and site construction work, EXCEPT the work included in the following Alternate Bids described in this section, which may result in changes to the costs.
- B. An Additive Alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Contract Documents that may be added to the Base Bid amount if accepted by the Owner.
- C. A Substitute Alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Contract Documents that may be added to or deducted from the Base Bid amount if accepted by the Owner.
- D. A Deductive Alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be deducted from the Base Bid amount if accepted by the Owner.

1.3 PROCEDURES

- A. Modify or adjust affected adjacent Work as necessary to completely and fully integrate the Alternate Work into the Project.
- B. Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

- C. Immediately following the award of the Contract, notify each party involved, in writing, of the status of each Alternate. Indicate whether Alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of any negotiated modifications to Alternates.
- D. Execute accepted Alternates under the same conditions as other Work of this Contract.
- E. A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate.
- F. Bid will be evaluated on any combination of Base Bid amount and Alternates. The Owner reserves the right to accept or reject any or all alternate bids regardless of bid prices or order in which the alternates are listed.

1.4 REINSTATEMENT OF ALTERNATES

- A. The Owner shall reserve the right to reinstate any or all of listed alternates at any time, up to a time when construction sequence and schedule shall "cover-up" that portion of work involved in any specific alternate.
- B. Reinstatement of the alternate shall be at the same figure as that given at the time of the bid opening plus additional construction cost as determined by the Construction Cost Index, as published in the Engineering News Record Magazine, latest index, after the first of the month following reinstatement.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 SCHEDULE OF ALTERNATE BIDS

- A. Alternate 1 – New Exterior Window Openings.
 - 1. Base Bid: Provide new exterior window openings and roller shades at Office 226, Workroom 230, Speech 215, Office 127, TSEC 125, and Special Ed. 212A. (6 total new window openings)
 - 2. Alternate 1: Provide new exterior window openings and roller shades at Classroom, Art, Science, Special Ed. and FCS spaces. (24 total new window locations)
 - 3. Related But Not Limited To Sections: Section 072700 and 085413
- B. Alternate 2 – Boiler Room Ceiling.
 - 1. Base Bid: Provide paint at Boiler Room 033 Ceiling.
 - 2. Alternate 2: Provide Ceiling type GWB-2 in lieu of paint at Boiler Room 033 per documents.
 - 3. Related But Not Limited To Sections: Section 092116 and 099000
- C. Alternate 3 – Power at Classroom Exterior Walls.
 - 1. Base Bid: Do not provide power at classroom exterior walls.
 - 2. Alternate 3: Provide power at classroom exterior walls per documents.

3. Related But Not Limited To Sections: Division 26.
- D. Alternate 4 – Existing Gymnasium A/V System
1. Base Bid: Do not provide A/V system at existing gymnasium.
 2. Alternate 4: Provide new A/V system in Existing Gymnasium (AV rack, projector, projector scree, scissor lift) per documents.
 3. Related But Not Limited To Sections: 115213 and Division 27
- E. Alternate 5 – Electrical/Low Voltage Work at Shop, Fieldhouse and Portables.
1. Base Bid: No work at Bldgs 2,3 and Portables
 2. Alternate 5: Provide work at Bldgs 2,3, and portables per sheet E403
 3. Related But Not Limited To Sections:
- F. Alternate 6 – Existing Gym Scoreboard and Shot Clock
1. Base Bid: Do not provide new scoreboard and shot clock at existing gym.
 2. Alternate 6: Provide new scoreboard and shot clock in existing gym.
 3. Related But Not Limited To Sections: 116643
- G. Alternate 7 – Exterior Electronic Reader Board.
1. Base Bid: Do not provide exterior reader board on west façade of existing building.
 2. Alternate 7: Provide electronic reader board on west wall of existing classroom building near gridline xC and x1, as shown in documents.
 3. Related But Not Limited To Sections: 104300
- H. Alternate 8 – Theatrical Lighting at Stage
1. Base Bid: Do not provide theatrical lighting at Stage.
 2. Alternate 8: Provide theatrical lighting at Stage.
 3. Related But Not Limited To Sections: Division 26
- I. Alternate 9 –Cyclorama and Stage Curtains.
1. Base Bid: Do not provide cyclorama or stage curtain at Stage.
 2. Alternate 9: Provide cyclorama curtain and stage curtains at Stage per documents.
 3. Related But Not Limited To Sections: 116100
- J. Alternate 10 – Ceiling Diffusing Panels at Music Room.
1. Base Bid: Provide ACT-7 at Music Room 148.
 2. Alternate 10: Provide Ceiling diffusing panels in lieu of ACT-7 at Music Room 148 per documents.
 3. Related But Not Limited To Sections: 095123 and 098400
- K. Alternate 11 – Wall Acoustic Panels at Cafeteria
1. Base Bid: Provide paint at Cafeteria Room 012.
 2. Alternate 11: Provide acoustical panels in lieu of paint at Cafeteria Room 012 per documents.
 3. Related But Not Limited To Sections: 098400 and 099000
- L. Alternate 12 – VWC Graphics.
1. Base Bid: Provide paint in hallways at Library, Admin and Cafeteria.
 2. Alternate 12: Provide VWC Graphics in lieu of paint in hallways at Library, Admin, and Cafeteria per documents.
 3. Related But Not Limited To Sections: 097200 and 099000

M. Alternate 13 – Delete Air Conditioning.

1. Base Bid: Provide Air Conditioning and associated work as shown in the project documents.
2. Alternate 13: Remove Air Conditioning from entire project.
 - Delete: Air Conditioning from entire project. Includes removal of chiller ch-1, chilled water pumps cp-4a and cp-4b, chilled water piping, cooling coils from air handling units, and associated valves and accessories.
 - Delete: Earthwork, concrete, asphalt, pipes, and curb shown on 'CHILLER PAD' detail on sheet C404, except asphalt associated with electrical conduit trench restoration.
 - Delete: Seed mix around chiller pad shown on sheet C301.
 - Delete: Striping between Existing Building 1 and Existing Buildings 2 and 3 shown on sheet C301.
 - Add: Striping on new asphalt for trench restoration between Existing Building 1 and Existing Buildings 2 and 3 to match existing conditions.
 - Delete: Feeders and circuit breakers for chiller ch-1, heat trace, chilled water pumps cp-4a and cp-4b.
 - Revise: Provide 1600 amp main switchboard msb in lieu of 2000 amp.
 - Delete: Drawing Sheet A114, Omit in its entirety
 - Delete: Drawing Sheet A621: Omit all references to STC 36 requirements, Omit IGU type IG-3.
 - Revise: Specification section 085413: Omit paragraphs 2.3F.1 and 2.3F.2
 - Modify: Sheet S100A -"LEVEL 0 BUILDING 1 AREA A – FOUNDATION/FIRST FLOOR PLAN"
 - DELETE callout "TOF AT CHILLER YARD NORTH WALL TO MATCH TOP OF ADJ (E) FTG. STEP FOOTING AS SHOWN IN WALL ELEVATION, GC COORD ELEVATION AND NUMBER OF FTG STEPS REQUIRED PER 29/S206"
 - DELETE callout "12" THICK CONCRETE RETAINING WALL AROUND CHILLER YARD. SEE DETAILS FOR TOF."
 - DELETE callout "PROVIDE MECH PAD FOR CHILLER PER 4/S020 SIZE PER MECH AND CHILLER MFR"
 - DELETE callout "PIPE PER MECH, SEE 13/S021"
 - DELETE callout "SEE 1/A114 FOR CHILLER YARD FENCE/GATE DETAILS"
 - DELETE callout "GATE POST, SEE ARCH, PROVIDE BASE PL PER 8/S206"
 - DELETE callout "5'-0" x 5'-0" x 18" FTG w/ (5) #6 REINF T&B EA WAY, TOP OF FTG TO MATCH TOP OF RETAINING WALL FTG, CONTINUE REINF THROUGH RETAINING WALL FTG, CTR FTG ON GATE POST"
 - DELETE detail reference 27/S206 at two (2) locations
 - DELETE wall elevation reference 1/S206, 6/S206, 16/S206
 - Delete: Sheet S206
3. Related But Not Limited To Sections: 03300, 051200, 075400, 085413, 236400

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements
 - 2. Unit Price Adjustments to Contract Sum
 - 3. Unit Price Schedule
- B. Related Requirements:
 - 1. Allowances
 - 2. Section 012600 - Contract Modification Procedures

1.2 ADMINISTRATIVE AND PROCEDURAL REQUIREMENTS

- A. Unit Prices establish means for adjusting Contract Sum by Change Order in accordance with Conditions of the Contract, based upon Unit Costs per Unit of Measure for each Unit Price Item.
- B. State dollar amount to establish Unit Price for each Unit Price Item in space provided on Bid Proposal Form. Failure to include all scheduled unit prices is grounds for rejecting bid.
- C. State dollar amount to cover complete work for each Unit Price Item. Include allowances, such as for measurement, labor, material, equipment, overhead and profit, and work of other Sections.
- D. Take measurements and compute quantities for Unit Price Items as Work proceeds. Maintain log for Owner review. When requested by Owner, provide equipment, and personnel necessary to assist in field verification of measurements and quantities.
- E. Adjust Contract Sum by Change Order for Unit Prices in accordance to provision of Contract Documents.

1.3 UNIT PRICE ADJUSTMENTS TO CONTRACT SUM

- A. Make written request to Owner to adjust Contract Sum through Contract modification procedures required by Conditions of the Contract for Unit Price work.
- B. Where actual Unit Price work is determined to have increased or decreased in excess of 50 percent from Estimated Quantity for Unit Price work, Owner or Contractor may make written request to adjust Contract Sum.
- C. Submit complete quantity breakdown made on basis of actual measurement and quantity, accepted by Owner and Architect, multiplied by Unit Price in Unit of Measure stated by Bidder on Form of Proposal.
- D. Owner reserves right to reject Contractor's measurement or quantity take-off for in-place work and to verify quantity or measure by independent surveyor or inspector, acceptable to Contractor.
- E. Adjustment to Contract Sum will be determined by Unit Price work actually incorporated into or deleted from estimated quantity of work, as established and verified by Owner.

1.4 UNIT PRICE SCHEDULE

- A. For Unit Prices UP-1 and UP-2: Excavation, material handling, and disposal of soil required to establish the planned subgrade elevations shall be included in the base scope of work and is not compensable as a Unit Price. Excavation below planned subgrades and backfilling of approved over-excavation areas will be tracked by the Geotechnical Engineer and stated in the Geotech site reports. Contractor shall review with Geotechnical Engineer all material quantities at the time the materials are handled, and quantities stated in the Geotechnical Engineer's site reports shall be presumed to be accurate and correct if so stated without objection by the Contractor.
- B. All extra work pertaining to UP-1 and UP-2 must have a geotechnical engineer present to verify the scope of the condition. At the end of each day the quantities of each Unit Price will be verified by the contractor and geotechnical engineer and reported in the daily geotechnical site reports.
- C. Unit Price No. UP-1 – Over Excavation and Export of Unanticipated Unsuitable Materials, as determined by the Geotechnical Engineer:
1. Description: The Unit price shall be applied to unanticipated unsuitable materials, as determined by the Owner's testing agency or Geotechnical Engineer, encountered below anticipated subgrade elevation. Unanticipated unsuitable material is the material (soil and other deleterious material) below the base bid subgrade elevation that does not meet the bearing capacity requirements as defined by the Contract Documents and Owner's testing agency or Geotechnical Engineer or include deleterious material such as wood, brick, concrete, or other building material. Unit price will include all labor, materials, and equipment (including sales tax) necessary for excavating the unsuitable soils, dewatering, street cleaning, traffic control (including flaggers), removal and legal disposal off site, documentation of the quantity removed, and all other incidental work necessary to complete this particular work item.
 2. Verification that scope is beyond base scope needs to be made by the Geotechnical Engineer prior to work.
 3. Unit of Measurement: Cubic Yard (CY) of soils excavated, trucked and legally dumped off site, measured from its original compacted and in-place location ("Bank yards"). Measurement by truck ticket will not be accepted.
- D. Unit Price No. UP-2– Import and Placement of Over Excavation Fill:
1. Description: Fill may be Foundation Ballast, Crushed surfacing top course, or Structural fill as defined in Section 312200 as required in addition to that required beyond level of excavation and fill indicated in contract documents. Unit price will include all labor, materials, and equipment necessary for hauling, dewatering, street cleaning, traffic control (including flaggers), placing, compacting, documentation of the quantity placed, and all other incidental work necessary to complete this particular work item.
 2. Verification that scope is beyond base scope needs to be made by the Geotechnical Engineer prior to work.
 3. Unit of Measurement: Cubic Yard (CY) in final place of fill imported, placed and compacted ("Bank yards) as measured by on site Geotechnical inspector.
- E. Unit Price No. UP-3 - Removal and Disposal of Asbestos-containing 9x9 and 12x12 Vinyl Tile.
- F. Unit Price No. UP-4 - Removal and Disposal of Asbestos-containing Vinyl Sheeting.
- G. Unit Price No. UP-5 - Removal and Disposal of Asbestos-containing 1, 2, 4, 6, and 8-inch Thermal System Pipe Insulation (TSI).

1.5 ALLOWANCES SCHEDULE

- A.** Allowance 1: UP-1 - Additional earthwork excavation
1. Amount: To be the Extended Price as listed on the Contractor's Bid Form for this Unit Price.
 2. Contractor shall include in the Base Bid amount an allowance for additional excavation of native soil that is determined to be unsuitable by the Geotechnical Engineer.
 3. The value of Allowance 1 shall be calculated by multiplying the value of Unit Price UP-1 by the quantity of cubic yards as listed in the bid documents.
- B.** Allowance 2: UP-2 - Additional Earthwork Imported Structural Fill.
1. Amount: To be the Extended Price as listed on the Contractor's Bid Form for this Unit Price.
 2. Contractor shall include in the Base Bid amount an allowance for additional imported structural fill delivered to the site, placed and compacted in place in a manner defined in the specification and as directed by the geotechnical Engineer.
 3. The value of Allowance 2 shall be calculated by multiplying the value of Unit Price UP-2 by the quantity of cubic yards as listed in the bid documents.
- C.** Allowance 3: UP-3 - Removal and Disposal of Asbestos-containing 9x9 and 12x12 Vinyl Tile.
1. Amount: To be the Extended Price as listed on the Contractor's Bid Form for this Unit Price.
 2. The value of Allowance 3 shall be calculated by multiplying the value of Unit Price UP-3 by the quantity of square feet as listed in the hazmat report dated 3/29/2021.
- D.** Allowance 4: UP-4 - Removal and Disposal of Asbestos-containing Vinyl Sheeting.
1. Amount: To be the Extended Price as listed on the Contractor's Bid Form for this Unit Price.
 2. The value of Allowance 4 shall be calculated by multiplying the value of Unit Price UP-4 by the quantity of square feet as listed in the hazmat report dated 3/29/2021.
- E.** Allowance 5: UP-5 - Removal and Disposal of Asbestos-containing 1, 2, 4, 6, and 8-inch Thermal System Pipe Insulation (TSI).
1. Amount: To be the Extended Price as listed on the Contractor's Bid Form for this Unit Price.
 2. The value of Allowance 5 shall be calculated by multiplying the value of Unit Price UP-5 by the quantity of linear feet as listed in the hazmat report dated 3/29/2021.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance.
- B. Product options.
- C. Product substitution procedures.
- D. Substitution Request Form.

1.2 QUALITY ASSURANCE

- A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.
- B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.
- C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless substitution has been accepted and approved in writing by Owner.

1.3 DEFINITIONS AND OPTIONS

- A. Performance, Reference Standard, and Descriptive Specifications:
 - 1. Manufacturer is not specified and requirements are specified purely by descriptive requirements, design requirements, performance requirements, reference standards, or codes.
 - 2. Products and options meeting or exceeding specified provisions are accepted.
- B. Open Proprietary Specifications:
 - 1. Products by one or more manufacturers are specified and specification makes provision for substitution requests.
 - 2. Conform to provisions for making substitution request as specified by this Section.
- C. Closed Proprietary Specifications:
 - 1. Products by one or more manufacturers are specified and specification Section does include provision for substitution requests.
 - 2. Provide work as specified. No substitution will be accepted.
- D. Basis-of-Design Specifications:
 - 1. Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

2. Provide either the specified product or a comparable product by one of the other named acceptable manufacturers. Drawings and specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with Comparable Product definition below. Substitutions will be considered only when Section 012500 Substitution Procedures is referred to.
- E. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

1.4 SUBSTITUTION REQUESTS DURING BIDDING PHASE

- A. Email Substitution Requests to reach Architect's office before 5 p.m. at least 10 working days prior to date for receiving Bids.
 1. Email sschafer@integrusarch.com
 2. Subject: HMS Substitution Request Section XXXXXX (provide correct section number)
 3. One substitution request per email.
 4. Complete and include Substitution Request Form provided at end of this section.
- B. Bidders will be notified of unaccepted substitutions by Addendum. No other form of acceptance is valid, including as stated verbally, written, emailed, faxed, or implied in other manner and bidders shall not rely upon any approval not incorporated into the Contract Documents in this manner.

1.5 SUBSTITUTION REQUESTS DURING CONSTRUCTION PHASE

- A. Submit Substitution Requests directly by or through Contractor to Architect.
- B. Substitution Requests following Bid Date will not be considered, except at discretion of Owner and subject to reimbursement for Architect's review. Review fee will apply whether or not substitution request is accepted.
 1. Exception: Substitution Requests may be reviewed in the event of special circumstances beyond Contractor's control. Reason for substitution request must be submitted on the attached Substitution Request Form.
- C. Reasons for consideration of substitutions include:
 1. Unavailability: Specified item has been discontinued; there are no available qualified installers; or lead-time is prohibitive relative to project schedule.
 2. Unsuitability: Subsequent information discloses specified item as unsuitable, inappropriate, unable to perform properly, or to fit designated space.
 3. Regulatory Requirements: Specified item fails to conform to building code interpretations or insurance regulations.
 4. Warranty: Manufacturer or fabricator has declared that specified item is unsuitable for intended use or refuses to certify or warrant performance of specified item for condition of use.
 5. Owner Prerogative: As requested by Owner for reduction of Contract Cost or Contract Time.

- D. Contractor will be notified by Architect on the form provided by the Contractor within two weeks of receipt of request, of decision to accept or reject Substitution Request.

1.6 PRODUCT SUBSTITUTION PROCEDURES

- A. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
 - 1. Manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
 - 2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
 - 3. Reference to Article and Paragraph numbers in Specification Section.
 - 4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
 - 5. Changes required in other Work.
 - 6. Availability of maintenance service and source of replacement parts as applicable.
 - 7. Certified test data to show compliance with performance characteristics specified.
 - 8. Samples when applicable or requested.
 - 9. Submit list of at least 3 projects where proposed substitution has been used within past 12 months. Include name, address, and telephone number of Owner and Architect.
 - 10. Other information as necessary to assist Architect/Engineer's evaluation.
- B. A request constitutes a representation that Bidder or Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 - 2. Will provide same warranty for substitution as for specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
 - 6. Will reimburse Owner and Architect/Engineer for review or redesign services associated with reapproval by authorities having jurisdiction.
- C. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request or when acceptance will require revision to Contract Documents.
- D. Substitution Submittal Procedure:
 - 1. Submit requests for substitutions on form attached to end of this Section (an electronic version of this form is available from the Architect upon request).
 - 2. Submit electronic files of Request for Substitution for consideration. Limit each request to one proposed substitution.
 - 3. Submit only 1 Substitution Request on each Substitution Request Form. Multiple Substitution Requests on a single form will not be accepted.
 - 4. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
 - 5. Architect/Engineer will notify Contractor in writing of decision to accept or reject request.

1.7 UNACCEPTABLE SUBSTITUTIONS

- A. Substitutions not accepted in writing by Architect.
- B. Substitutions that are not submitted on Substitution Request Form or facsimile following this Section.
- C. Substitution Requests that do not provide complete, adequate, or clearly defined information for a thorough and timely evaluation.
- D. Substitutions that, if accepted, will require substantial revisions to Contract Documents.
- E. Substitutions that are shown or implied by shop drawings and other submittals.
- F. Substitutions not accepted by published Addenda during Bidding Period and not accepted in writing by Architect during Construction Period.
- G. Substitutions installed into the Work and not accepted by Architect, constitute non-conforming work and may be rejected by Owner without further discussion or explanation.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

Attachment: Substitution Request Form.

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: _____

PROJECT: _____

SPECIFIED ITEM:

Section	Page	Paragraph	Description
---------	------	-----------	-------------

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes description of changes to Contract Documents that the proposed substitution will require for its proper installation.

Attach list of at least 3 projects where proposed substitution has been used within past 12 months. Include name, address, and telephone number of Owner and Architect.

The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance and quality of the proposed substitution are equivalent or superior to the specified item.

Submitted by:

Name (Printed)

Signature

noted
Firm Name

late
Address

City, State, Zip

For use by the A/E:

☐ Accepted

☐ Accepted as

☐ Not Accepted

☐ Received too

By

Date

Date

Telephone

Remarks

Attachments:

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Initial Requirements
 - 2. Initiating and Proposing Changes
 - 3. Architect's Supplemental Instructions
 - 4. Documentation of Change in Contract Sum and Contract Time.
 - 5. Approval or Rejection of Proposal
 - 6. Construction Change Directive
 - 7. Change Order
 - 8. Allowance for Overhead and Profit
 - 9. Correlation of Contractor Submittals

1.2 INITIAL REQUIREMENTS

- A. Within 30 days of the Notice to Proceed, the Contractor shall submit a list of all equipment anticipated to be used on the project and whether it is owned or to be rented, using a form acceptable to the Architect and Owner. If during the construction process additional equipment is brought to the Project site, the Contractor shall submit an updated list.
- B. Submit name of individual authorized to receive Change Documents, and to be responsible for informing others in Contractor's employ and to applicable subcontractors of changes to the Work.

1.3 INITIATING AND PROPOSING CHANGES

- A. Proposal Request: Issued by the Architect to the Contractor on the Owner's behalf including a detailed description of proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with stipulation of overtime work required and the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within seven days.
 - 1. Proposal Requests are for information only. Do not consider them as an instruction (direction) either to stop work in progress or to execute the proposed change.
- B. Contractor Initiated Change Request: Describe proposed change and its full effect on the Work. Include a statement describing reason for the change, and effect on Contract Sum and Contract Time with full documentation and a statement describing effect on Work by separate or other Contractors. Document requested substitutions in accordance with Section 012500 - Substitution Procedures.
 - 1. Contractor is to do no work on the proposed change until the Change Request is formalized by a Construction Change Directive or Change Order.

1.4 ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS (ASI)

- A. The Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on a form prepared by the Architect. If the Contractor believes a cost is associated with the supplemental instructions, the Contractor is to provide written notice to the Architect within 7 days of receipt of the instructions, outlining all associated costs as outlined in Part 1.4 DOCUMENTATION OF CHANGE IN CONTRACT SUM.

1.5 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

- A. Change Order Proposal (COP): Submit electronically information required for Architect's evaluation of proposed changes.
- B. Contract Time: No additional funds will be issued or considered payable to the Contractor for time extension claims prior to Substantial Completion; the end of documented Contract Time as specified in the General Conditions AIA A201.
- C. Support each lump sum proposal quotation, and each unit price (not previously established) with sufficient substantiating data.
 - 1. On request, provide additional data to support time and cost computations:
 - a. Labor required.
 - b. Equipment required.
 - c. Products required.
 - 1) Recommended source of purchase and unit cost.
 - 2) Quantities required.
 - d. Taxes, insurance, and bonds.
 - e. Documented credit for work deleted from Contract.
 - f. Overhead and profit.
 - g. Justification for any change in Contract Time.
 - 2. Submit additional substantiating data to support computations, as requested by Architect.
 - 3. Support each proposal for additional costs, and time-and-material work, with documentation, as required for lump-sum proposal. Include additional information:
 - a. Name of Architect or Owner's authorized agent who ordered work, and date of order.
 - b. Dates and times work was performed, and by whom (firm or individual).
 - c. Time record, summary of hours worked, and hourly rates paid.
 - d. Receipts and invoices for:
 - 1) Equipment used, listing dates and times of use.
 - 2) Products used and listing of quantities.
 - 3) Subcontracted work.
 - 4. Document Requests for Substitutions.
 - 5. Statement as to whether overtime work is, or is not, necessary.

1.6 APPROVAL OR REJECTION OF PROPOSAL

- A. When change is initiated by Architect or Owner:
 - 1. Contractor to submit a detailed proposal in writing. Quotation (cost estimate) must be guaranteed for period specified in Proposal Request beginning from signing of proposal. If no period is specified, guarantee quotation for sixty (60) days from signing.
 - 2. Architect and/or Owner will review the proposal and respond in writing with one of the following:
 - a. Request for additional information.
 - b. Approval to be issued by CCD for subsequent inclusion in a Change Order.
 - c. Rejection of the proposal and direction to continue with contracted work.
 - 3. Contractor may not proceed with the proposed changed work until a signed CCD or Change Order is received from the Owner.
- B. When a change proposal is initiated by Contractor:
 - 1. The Architect and/or Owner will review it and respond in writing with one of the following:
 - a. Approve the Contractor's cost proposal;
 - b. Request additional information;
 - c. Reject the proposal.
 - 2. If the Owner responds by approving the Contractor's change proposal, a CCD will be processed.
 - a. If additional information is requested by Owner, respond in writing within fifteen (15) days of Owner's request.
- C. Concurrence of the Building Official:
 - 1. Note that all significant modifications to the Contract Documents reviewed by the AHJ, including Change Orders "approved" by the Architect and Owner, must also be approved by the Building Official.
 - 2. Any significant changes, such as structural changes and life safety modifications, will be submitted for review and approval to the AHJ. Contractor may not proceed with such work until the AHJ has reviewed the change and indicated that it is acceptable.

1.7 CONSTRUCTION CHANGE DIRECTIVE (CCD)

- A. Construction Change Directive:
 - 1. May be issued by Architect with Owner's approval, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order.
 - 2. Will describe changes in work, and will designate method of determining change in Contract Sum or Contract Time.
- B. Contractor: Promptly execute change to the Work.
- C. Claims for Adjustments to Contract Time or Contract Sum:
 - 1. Burden of proof is upon Contractor to submit data substantiating requested increase of Contract Sum and Contract Time for inclusion into approved Change Order.
 - 2. Submit claims within 30 days after completion of Construction Change Directive. Claims after this time are invalid.

- D. Overhead and Profit for Change to Contract Sum: Conform to provisions of Contract Documents, including the General Conditions.
- E. Prevailing Wages: Limit direct costs for labor, wages, and fringe benefits to amounts indicated by Conditions of the Contract including the General Conditions and prevailing wage rate requirements.

1.8 CHANGE ORDER (CO)

- A. Stipulated Sum Change Order
 - 1. Based on Proposal Request and Contractor's fixed maximum price quotation or Contractor's request for change.
 - 2. Execute Change Order for changes to the Work affecting Contract Sum or Contract Time.
- B. Unit Price Change Order
 - 1. Pre-determined Unit Prices and Quantities: Execute Change Order executed on fixed unit price bases.
 - 2. Unit Costs or Quantities of Units of Work Which are not Pre-Determined: Execute Work under a Construction Change Directive.
 - 3. Changes in Contract Sum or Contract Time: Compute as specified for a Time and Materials Change Order.
- C. Time and Material Change Order
 - 1. Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract.
 - 2. Allowable Change to Contract Sum and Contract Time: As determined by Architect under provisions of Contract Documents, including the General Conditions.
 - 3. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- D. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

1.9 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
- B. Promptly revise progress schedules and applicable sub-schedules to reflect change in Contract Time and to adjust times for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Construction Organization.
 - 2. Cooperation and Coordination of Work.
 - 3. Project Coordination and Scheduling Control.
 - 4. Mechanical and Electrical Coordination.
 - 5. Job Site Field Measurements And Templates.
 - 6. Dimensions.
 - 7. Intent of Drawings.
 - 8. Interferences and Right of Way.
 - 9. Electronic 3D Coordination.
 - 10. Notification and Correction of Defective Work.
 - 11. Coordination Utilities.
 - 12. Closeout Coordination.

1.2 GENERAL COORDINATION REQUIREMENTS

- A. Coordinate scheduling, submittals and work identified in the Contract to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items to be installed later.
- B. Coordinate work between all Sections of Contract Documents to avoid conflicts and omissions. Take special care to coordinate work indicated as Architectural, Mechanical, Electrical and other major Divisions of the Contract Documents.
- C. Responsibility
 - 1. The Contractor shall be in charge of this Contract and the site, as well as the directing and scheduling of all Work. Contractor shall be on site at all times work of this Contract is in progress. Do not delegate responsibility for coordination to any subcontractor.
 - 2. Anticipate interrelationship of all subcontractors and their relationship with the total Work.
 - 3. Resolve differences or disputes between subcontractors and materials suppliers concerning coordination, interference, or extent of Work between Sections. Contractor's decisions, if consistent with Contract Document requirements, shall be final.
 - 4. Final responsibility for the performance, interface, and completion of the Work and the Project in accordance with the Contract Documents shall be with the Contractor.
- D. Prior to any work beginning on the site, the Contractor shall submit, and receive final approval on:
 - 1. Construction schedule;
 - 2. All required plans, including, but not limited to, safety, demolition, quality control, waste management and indoor air quality.
 - 3. All materials to be used on the project in accordance with Section 013300 - Submittal Procedures.

1.3 SPECIAL COORDINATION

- A. Additional special requirements and conditions apply to the work of this contract. Refer to Section 015000 - Temporary Facilities and Controls, for detailed description of these additional requirements and conditions.
- B. The Owner will require access to the site to perform work related or unrelated to the project. The Contractor shall coordinate with the Owner to accommodate such work within the contract time.

1.4 COORDINATION SHOP DRAWINGS

- A. Coordination Drawings: Prepare and submit Coordination Drawings where close and careful coordination is required for installation of products and materials fabricated offsite by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. Show interrelationship of components on separate Shop Drawings.
 - 2. Indicate required installation sequence.
 - 3. Comply with requirements contained in Section 013300.

1.5 CONSTRUCTION ORGANIZATION

- A. On-Site Lines Of Authority & Communications: Refer to Section 013115 - Communication.
- B. Intra-Project Communications:
 - 1. Submittals.
 - 2. Reports and records.
 - 3. Recommendations.
 - 4. Coordination drawings.
 - 5. Schedules.
 - 6. Resolution of conflicts.
- C. Construction Mobilization
 - 1. Cooperate with the Owner's Representative in allocation of mobilization areas of the site; for field offices and sheds, for access, traffic and parking facilities.
 - 2. Comply with Architect and Owner's Representative's procedures for intra-project communications.
 - 3. Coordinate field engineering and layout work under instructions of Owner's Representative.

- D. Coordination of Reports/Activities: Coordinate both the procedural timing and the listing (naming and sequencing) of reports/activities required by provisions of this Section and other sections, to afford consistency and logical coordination between submitted reports or lists. Maintain coordination and correlation between separate reports by updating at monthly or shorter time intervals. Distribute each report and updated report to entities involved in the work, including Architect and Owner's Representative. In particular, provide close coordination of Progress Schedule, Schedule of Values (see Section 012000 - Price and Payment Procedures), listing of subcontracts, schedule of submittals, progress reports, and payment requests.
- E. Coordination of Submittals
 - 1. Schedule and coordinate submittals specified in the Contract Documents.
 - 2. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to and placing equipment in service.
 - 3. Coordinate request for substitutions to assure compatibility of space, operating elements, and effect on work of other Sections.
- F. Coordination & Pre-Installation Meetings: Refer to Section 013119 - Project Meetings.
- G. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into the Work.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 COOPERATION & COORDINATION OF WORK

- A. The Contractor is responsible for the coordination of the work of all trades; coordinating the installation of their work and that of all subcontractors to ensure compliance with the Contract Documents and to expedite the progress of the Project. Contractor shall check specifications, addenda, and drawings covering all trades as the work progresses. Contractor shall promptly report to the Architect what they consider omissions, conflicts or points requiring clarification.
- B. Contractor shall prepare and distribute to each entity performing work at project site, a written memorandum of instructions on required coordination activities, including required notices, reports and attendance at meetings.
- C. Enclosure of the Work: The Contractor shall coordinate enclosure of work with required inspections and tests, so as to avoid the necessity of uncovering work for that purpose.

- D. It is the responsibility of the Contractor to ensure that the work of subcontractors complies with Conditions of the Contract, Division 1 - General Requirements, and the work of other Sections related to their own work. No additional payments or time extensions will be authorized for failure on the part of subcontractors to be familiar with and in compliance with the aforementioned specification divisions and sections.
- E. Inclusion of portions of the work under particular divisions of the specifications or sections of the drawings does not in every case conform to the categories of work customarily subcontracted to particular crafts or trades. In such cases, the Contractor shall be responsible to inform bidders, subcontractors, crafts and trades, that work assigned to them is contained in sections other than the usual. In every case, the General Contractor shall be responsible to provide at its cost, all work required in the Contract Documents.
 - 1. Provide project interface and coordination as required to properly and accurately bring together the several parts, components, systems, and assemblies and as required to complete the Work and the Project.
 - 2. Provide interface and coordination of all trades, crafts, and subcontracts as required to provide correct and accurate connection of abutting, adjoining, overlapping, and related Work, and provide all anchors, fasteners, accessories, appurtenances, and incidental items as required to complete the Work properly, fully, and correctly in accordance with the Contract Documents.
 - 3. Provide additional structural components, miscellaneous metal, bracing, blocking, backing, clips, anchors, fasteners, and installation accessories as required to properly anchor, fasten, or attach materials, equipment, appliances, hardware, systems, assemblies, cabinets, and architectural features to the structure.
 - 4. Provide excavation and backfill, trenching and drilling for all trades as required for the installation of their Work.
 - 5. Provide concrete foundations, pads, supports, bases, and grouting for all trades as required for the installation of their Work.
 - 6. Provide caulking, sealing, and flashings as required to completely weatherproof the building and as required to insulate the building thermally and acoustically. Include caulking, sealing, flashings, and related work as required to prevent moisture intrusion, air infiltration, and light leakage.
 - 7. Provide equipment, appliances, fixtures, and systems requiring plumbing and mechanical services, rough-in, and connections, or other utilities and services, with such services, rough-in, and final connections.
 - 8. Provide equipment, appliances, fixtures, and systems requiring electrical and cabling services, rough-in, and connections, or other utilities and services, with such services, rough-in, and final connections.
 - 9. Materials, equipment, component parts, accessories, incidental items, connections, and services required to complete the Work which are not provided by subcontractors shall be provided by the Contractor.

3.2 PROJECT COORDINATION AND SCHEDULING CONTROL

- A. The Contractor shall schedule and coordinate the work of all subcontractors on the project including their use of the site. Responsibility for coordination and close adherence to time schedules rests solely with the Contractor who shall maintain coordination and scheduling control at all times.

- B. Each subcontractor responsible to the Contractor shall cooperate diligently with the Contractor in the execution of their work so as to cause no delay in the completion of the Project. This responsibility includes the completion of all work in a timely manner. All Contractors, Prime Contractor and Subcontractors, shall diligently comply with the following requirements:
1. Cooperate in planning and layout of the work well in advance of operations.
 2. Inform other contractors of requirements at proper time to prevent delay or revisions.
 3. Be informed on the requirements of other contractors and check own work for conflicts with the work of other contractors.
 4. Insure delivery of materials and performance of work on coordinated schedule with other contractors.
 5. Contractor shall ensure subcontractors and equipment suppliers are responsible for compatibility and completeness of the installation and operation of the equipment in their respective Specification Sections including conformance with code requirements.
 6. Attend Pre-Installation meetings identified in Section 013119.
 7. Contractor shall be represented on the job site by his superintendent at all times when there is construction going on, including the work of his subcontractors, as well as his own.
- C. Changing Subcontractors: The General Contractor shall be responsible for all the additional expenses incurred by changing subcontractors during the course of this project. These additional expenses include, but are not limited to, A/E expenses for duplicate or redundant submittals, requests for information, or any clarifications or revisions that might occur due to the fact that new subcontractor(s) have assumed responsibility for a portion(s) of the Work.

3.3 MECHANICAL AND ELECTRICAL COORDINATION

- A. Refer to Divisions 21 - 23 for Mechanical Coordination and Divisions 26 - 28 for Electrical Coordination.

3.4 JOB SITE FIELD MEASUREMENTS AND TEMPLATES

- A. Obtain field measurements required for accurate fabrication and installation of Work included in this Contract. Exact measurements are the Contractor's responsibility.
- B. Contractor shall be responsible for field verifying actual dimensions where "+/-" dimensions are indicated, or the words "field verify."
- C. Furnish or obtain templates, patterns, and setting instructions as required for installation of all Work. Verify all dimensions in the field.

3.5 DIMENSIONS

- A. The Structural Drawings are to be used in conjunction with the Architectural, Plumbing, Mechanical and Electrical Drawings. Primary structural elements are dimensioned on the structural plans and details. Not all secondary dimensions are shown, such as exact door and window locations, wall configurations, slab slopes and depressions, curbs, etc. Coordination of the structure with the dimensions as shown on the Drawings and architectural items to be embedded into, or attached to the structure, is the responsibility of the Contractor. Any dimensional discrepancies between the Architectural, Civil, Structural, Plumbing, Mechanical and Electrical drawings shall be reported to the Owner's Representative and Architect before proceeding with the work.

3.6 INTENT OF DRAWINGS

- A. The work of the Contractor and subcontractors shall conform to the intent of the architectural and engineering drawings as reviewed by the Architect. Drawings are partly diagrammatic and do not intend to show in details all features of work. The Contractor shall carefully review the work to be performed by other trades, compare related drawings and shall thoroughly understand the building conditions affecting their work.
- B. All changes required in the work caused by failure to do so shall be at no expense to the Owner.

3.7 INTERFERENCES AND RIGHT-OF-WAY

- A. Make proper provisions to avoid interferences. Where conflicts occur, architectural and structural has right-of-way over mechanical and electrical work; concealed mechanical work has right-of-way over concealed electrical work; exposed electrical fixtures have right-of-way over mechanical fixtures.
- B. Submit conflicts which cannot be resolved by right-of-way to the Architect for direction.
- C. Submit reflected ceiling coordination plans showing work by all applicable trades for review and approval by the Architect.

3.8 ELECTRONIC 3D COORDINATION

- A. Provide Clash Detection software to determine field conflicts by comparing 3D models of building systems.
- B. Require attendance of subcontractors working on areas where clash detection is used at coordination meetings to coordinate work on site utilizing visual representation of a 3D model.

3.9 NOTIFICATION & CORRECTION OF DEFECTIVE WORK

- A. Coordinate the Work of all subcontractors and make certain that, where the work of one trade is dependent upon the work of another trade, the work first installed is properly placed, installed, aligned and finished as specified or required to properly receive subsequent materials applied or attached thereto.

- B. Direct subcontractors to correct defects in substrates they install when subcontractors of subsequent materials have a reasonable and justifiable objection to such surfaces. Promptly notify the Owner's Representative and Architect of any defects or imperfections in preparatory work which will in any way affect satisfactory completion of the work.
- C. Under no condition shall a section of work proceed prior to preparatory work having been completed, cured, dried or otherwise made satisfactory to receive such related work. Do not force subcontractors to apply or install products to improperly finished product.
- D. Correction of defective work shall be the responsibility of the Contractor or subcontractor providing the defective work. Correction of work due to underlying defects shall be the responsibility of the Contractor or subcontractor providing overlying work.

3.10 COORDINATING UTILITIES

- A. Contractor shall be responsible for coordination of and shall cooperate with all utilities to be installed for service to the Project. Utilities may include, but are not limited to, natural gas, telephone, electrical, and cable television. The Contractor shall maintain communication with the utilities in order to coordinate time and requirements of the utilities' installation.
- B. Contractor shall provide all work necessary to comply with the requirements of the Contract Documents for utility work that does not meet the Contract Document requirements, or for work that is disturbed by the utility installation.

3.11 CLOSEOUT COORDINATION

- A. General
 - 1. Coordinate completion and cleanup of work by the various trades in preparation for Substantial Completion.
 - 2. After Owner occupancy of premises, coordinate access to site by the various trades involved for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.
 - 3. Assemble and coordinate closeout submittals.
- B. At completion of Work of each Subcontract, conduct inspection to assure that:
 - 1. Work is acceptable.
 - 2. Temporary facilities and debris have been removed from site.
- C. At Substantial Completion:
 - 1. Conduct inspection and prepare list of work to be completed or corrected.
 - 2. Assist Architect and Owner's Representative in inspection.
 - 3. Supervise correction and completion of Work as established in Architect's inspection reports ("punch lists").
 - 4. Obtain Certificate of Occupancy from governing authorities.
- D. At Final Completion: Assist Architect and Owner's Representative in inspection.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General Communication.
 - 2. Emergency Communication.
 - 3. Correspondence.
 - 4. Request for Information.
 - 5. Non Compliance Notice.

1.2 GENERAL COMMUNICATION

- A. All telephone and electronic communication and other correspondence shall be between Contractor and Architect, unless otherwise noted below.
- B. Subcontractors are not to contact members of the design team directly unless explicitly agreed to by Contractor, Architect and Owner's Representative. All such contact and discussions are to be documented in writing by the subcontractor and submitted to the Architect and Owner's Representative through the Contractor.
- C. The General Contractor shall transmit problems or questions in writing using a Request for Information (RFI) form.
- D. On-Site Lines of Authority and Communications: Establish on-site lines of authority and communications including attendance at Pre-Construction Meeting and Progress Meetings as required by the Architect and Owner's Representative. All on-site lines of authority and communications shall be established through the Architect.
- E. The Architect and Owner's Representative, will typically be working during the Contractor's normal working hours as defined in Section 011000 - Summary. The Contractor shall anticipate that all communication and weekly construction meetings with these parties will occur between the hours of 8 a.m. and 5 p.m. Monday through Friday throughout the duration of the Project.
- F. No overtime payments will be authorized, or time delays allowed, for the Contractor or subcontractors efforts to communicate with the Architect and Owner's Representative outside of the normal working hours.

1.3 EMERGENCY COMMUNICATION

- A. Provide an Emergency Notification list to the Architect and to the Owner.
 - 1. The Contractor shall provide a list of names, pagers, wireless and traditional telephone numbers of staff who are capable of addressing an emergency issue that may occur outside of Contractor's normal working hours. The persons designated on the list shall be available at the project site within 60 minutes of being contacted. Provide two names for each of the following:
 - a. General Contractor
 - b. Mechanical subcontractor
 - c. Electrical subcontractor

- d. Other major subcontractors
- 2. Submit the list to the Architect 5 working days prior to the Preconstruction Meeting. The Architect will include the same information for design team members and Owner representatives and distribute the list at the Preconstruction Meeting.

1.4 CORRESPONDENCE

- A. All correspondence to and from Contractor will be routed through Architect with a copy to the Owner's Representative.
- B. Include project title and Architect's project number on all correspondence.

1.5 REQUEST FOR INFORMATION (RFI)

- A. It is the Contractor's responsibility to review Contract Documents in a timely manner so that the Architect shall have sufficient time to respond to a Request for Information prior to the start of actual construction of that part of the Work.
- B. When field conditions or Contract Document contents require clarification or verification by the Architect or Architect's sub-consultants, a written RFI is to be submitted as follows:
 - 1. Identify the nature and location of each clarification/verification using a RFI form. Provide as a minimum the following information:
 - a. Project name and number.
 - b. Date.
 - c. Date response desired.
 - d. RFI number.
 - e. Subject.
 - f. Initiator of the question (individual and firm).
 - g. Indication of costs, if known.
 - h. Location on site.
 - i. Contract drawing reference.
 - j. Contract specification section and paragraph reference.
 - k. Descriptive text.
 - l. Signature of Contractor.
 - m. Attachments, including descriptive drawings, photographs, product data, submittals, dimensions, configurations, and other information needed to clarify request.
 - n. Space for reply on same page as question.
 - 2. Number each RFI sequentially beginning with number 001 (RFI-001). Only one question per RFI.
 - a. Indicate subject by designation of GEN, MECH, ELEC, CIV, or other easily identifiable discipline abbreviation.
 - b. Single subject matter, 1 item each - architectural, civil, structural, mechanical, electrical or general.
 - 3. RFI may be hand-delivered, mailed, e-mailed or faxed, depending upon the urgency.
- C. Uses
 - 1. The RFI form shall be used for interpretation or clarification of the Contract Documents only.
 - 2. Do not use the RFI form for the following. The Architect will not reply and the RFI will be returned without action.
 - a. Product or material substitutions (See Section 012500 - Substitution Procedures).

- b. Questions relating to construction means, methods, techniques, sequences, procedures, or safety precautions. These are the Contractor's responsibilities exclusively.
 - c. Questions relating to construction schedule, coordination between trades, or division of work among subcontractors. These are Contractor's responsibilities exclusively.
 - d. Questions on contract administration procedural matters, unless they require interpretation or clarifications of the Contract Documents.
 - e. Dimensions or quantities which are shown on the Contract Documents, which can be measured or calculated from the information contained in the Contract Documents where such measurement or calculation is standard construction industry practice.
 - f. Confirmation of interpretations or clarifications previously provided by the Architect.
 - g. The Contractor shall not initiate requests for interpretations or clarifications of the Contract Documents which can be reasonably derived from a review of the Contract Documents.
- D. Route RFI's in same manner as correspondence.
- E. Clarifications may be discussed on-site or by telephone with Architect or Architect's Consultants, with concurrence of the Architect. A summary of these discussions is to be incorporated into a RFI form and submitted as written confirmation, for normal RFI processing.
- F. Reply
 - 1. The Architect will endeavor to reply to all RFI's as promptly as his work schedule allows, and generally no later than 7 working days from the day received. The Architect and/or its sub-consultants will attempt to expedite those RFI's indicated by the Contractor as being critical to the construction schedule.
 - 2. When an RFI involves a complex subject, extensive research or governmental agency contact, the Architect will inform the Contractor that additional time is required to prepare a reply. The Contractor shall cooperate and agree to reasonable additional time.
 - 3. The reply shall be a clarification or an interpretation of the Contract Documents; the reply is not an authorization of change in the Contract Sum or Time.
 - 4. Where Architect's action may affect Contract Time or Contract Sum:
 - a. Notify Architect in writing within 10 days of receipt.
 - b. Conform to Conditions of the Contract for submittal of Change Order Proposal, Section 012600 - Contract Modification Procedures.
- G. On receipt of Architect response to RFI:
 - 1. Update RFI log and promptly distribute RFI response to those affected by response.
 - 2. Review and notify Architect within 7 days if Contractor disagrees with response.
- H. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by RFI number. Submit log weekly. Include following:
 - 1. Project Name.
 - 2. Name and address of Contractor.
 - 3. Name and address of Architect.
 - 4. RFI number including those that were dropped and not submitted.
 - 5. RFI description.
 - 6. Date RFI was submitted.

7. Date Architect's response was received.
 8. Identification of related Minor Changes in the Work, Architect's Supplemental Instructions (ASI), Construction Change Directives (CCD), and Proposal Requests, as applicable.
- I. Note: Architect will respond only to requests for interpretation of Contract Documents originating from Contractor. The Contractor shall be deemed to be the author of all RFI's, whether written by him or one of his sub-contractors or suppliers. It is the Contractor's responsibility to ensure that all RFI's are complete and correct in form, and the Contractor shall be the contact for further information or explanation. All replies shall be directed to the Contractor, and it is his responsibility to ensure that the appropriate contractor personnel are copied or informed of the replies.

1.6 NON-COMPLIANCE NOTICE (NCN)

- A. Any work that is identified as "not in compliance" with the Contract Documents, either by oral discussion with the Contractor, or written communication to the Contractor, shall be removed and replaced without cost to the Owner, including removal of additional material necessary to confirm non-compliance. At its option, the Owner may accept written alternative solutions offered by the Contractor and recommended by the Architect. The Contractor shall notify the Architect and Owner in writing immediately following oral discussion or receipt of any written communication if the Contractor believes that the Work in question is in compliance with the Contract Documents. The Architect will make a determination based on the Contract Documents. If the Architect finds the work is in noncompliance, the Architect will issue a written Non-Compliance Notice (NCN). Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. Upon receipt of the NCN, the Contractor shall take immediate action to correct work. Review corrections at progress meetings for closure.
- B. If the Contractor fails to or refuses to comply promptly after the final determination of the appropriate corrective action, the Owner may:
1. Issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Owner will not pay for non-complying work or follow on work until the non-complying work is corrected or replaced. If it becomes necessary to stop work due to non-correction of non-complying work, no delay claim, time extension, or compensation will be granted.
 2. Elect to correct the non-compliant work with his own forces, or those of another contractor, and back charge the Contractor by issuing a deductive Change Order, with appropriate explanation and supporting data, which the Contractor is required to sign. Should the Contractor elect not to sign the deductive Change Order, he will be deemed to be in breach of the contract and the dispute will be subject to the Dispute Resolution Procedures of the General Conditions.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
 - 1. Preconstruction meeting.
 - 2. Progress meetings.
 - 3. Coordination meetings.
 - 4. Pre-installation meetings.
 - 5. Commissioning meetings.
 - 6. Project closeout meetings.
 - 7. Owner training meetings.

1.2 PRECONSTRUCTION MEETING

- A. The Architect will schedule a preconstruction conference before starting construction, at a time convenient to the Contractor and the Owner, but no later than 15 days after the Notice to Proceed. The conference will be held at the Project Site or another convenient location as selected by Owner.
- B. Attendance is required of the following:
 - 1. Architect and Architect's consultants.
 - 2. Owner's Representatives.
 - 3. Contractor's Superintendent and Project Manager; Contractor's QC Representative if different individual than the Project Manager.
 - 4. Major Subcontractors.
 - 5. Others, as requested.
- C. Discussion will cover items of significance, including the following:
 - 1. Communication chain and persons authorized to direct changes.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Submission of list of Subcontractors and preliminary progress schedule per Section 013216 - Construction Progress Schedule.
 - 4. The Work.
 - 5. Construction Team roles.
 - 6. Work hours, sequence, phasing, and occupancy.
 - 7. Special project procedures.
 - 8. Procedures and processing for Application for Payments; Change Orders (CO);
 - 9. Requests for Information (RFI); Architect Supplemental Instructions (ASI); Field decisions; Submittals; and others as appropriate.
 - 10. Project record documents including review of as-builts on a regular basis during construction.
 - 11. Construction facilities, and controls.
 - 12. Temporary utilities.
 - 13. Safety and security procedures.
 - 14. Environmental and noise controls.
 - 15. Housekeeping and site maintenance procedures.
 - 16. Utility shutdowns / Outage Request Form.
 - 17. Site Access and Parking.

18. Equipment deliveries and priorities.
 19. Testing Procedures.
 20. Scheduling Progress Meetings.
 21. Schedule Review.
 22. Contractor's Quality Control Program
 23. Hazardous material abatement procedures, if any.
 24. WSSP Design Requirements (See Section 018113).
 25. Draft Waste Management Plan
 26. Draft IAQ Plan.
 27. Use of site and premises by Owner and Contractor.
 28. Requirements for start-up of equipment.
 29. Inspection and acceptance of equipment put into service during construction period.
 30. Others, as appropriate.
- D. The Architect will:
1. Conduct the meeting to review contract administration requirements.
 2. Record, produce, and distribute copies of the minutes to the Owner and General Contractor within seven (7) days of the meeting.
- E. The Contractor will:
1. The General Contractor shall be responsible to distribute copies to all other Contractor attendees.

1.3 PROGRESS MEETINGS

- A. For purposes of coordination and scheduling after start of the work, weekly Progress Meetings will be held to enable an orderly review of the construction progress and to provide for systematic discussion and analysis of concerns that may arise relative to execution of the work.
- B. Contractor, and Subcontractors as required, shall incorporate attendance at these meetings as part of the Base Bid of the project – no overtime payments will be authorized for Contractor or Subcontractors to attend weekly Progress Meetings or other special meetings if required.
- C. Meeting Locations: ADA accessible Contractor's project field office or Owner provided meeting room, unless otherwise agreed.
- D. Attendance: Representatives attending meetings are required to be qualified and authorized to act on behalf of their firms. Attendance shall include:
1. Architect and Architect's consultants, as appropriate.
 2. Owner's Representatives.
 3. Contractor's Superintendent, Project Manager, and QC Representative.
 4. Subcontractors, as appropriate.
 5. Suppliers, as appropriate.
 6. Others, as appropriate.
- E. Agenda: Discussion will pertain to items, such as:
1. Attendees; list of attendees and company they represent.
 2. Review and approve minutes of previous meeting; written corrections, additions and/or deletions to previous minutes acknowledged.
 3. Review of Work in Progress: Discussion and field review.
 4. Review Short Interval Schedule.

5. Review Outages.
 6. Review construction schedule.
 7. Present corrective measures and procedures to regain project schedule, as applicable.
 8. Present field observations, problems, and conflicts; discuss concerns pertaining to:
 - a. Civil items.
 - b. Structural items.
 - c. Mechanical items.
 - d. Electrical items.
 - e. Architectural items.
 9. Discuss problems impeding progress schedule.
 10. Planned progress during succeeding work period.
 11. Review Contractor's quality control system; discuss any concerns and corrective measures.
 12. Review submittal schedules and logs, present methods to expedite as required.
 13. Review off-site fabrication.
 14. Review delivery schedules.
 15. Review outstanding RFIs.
 16. Review proposed changes for:
 - a. Effect on construction schedule and on completion date.
 - b. Effect on any other contracts of the project.
 17. Review Change Order Proposal log and finalize prices.
 18. Review draft of Application for Payment (at end of month).
 19. Confirm status of the "as-built" drawings and review required revisions to Project Record Documents; see update requirements specified below.
 20. Confirm status of shop drawing submittals and approvals.
 21. Review project safety.
 22. Review Waste Management Plan.
 23. Review any outstanding Non-Compliance Notices.
 24. Review any other business.
 25. Confirm next meeting date, location and time plus those requested to be in attendance.
- F. Contractor will:
1. Record and distribute the following by e-mail within 3 working days after the meeting: Meeting Minutes, RFI, ASI, Submittal/Shop Drawing and Cost Change logs. Distribution to include all attendees other than those related to the General Contractor's contract. The General Contractor is responsible to distribute copies to all Contractor attendees.
 2. Provide paper copies of the minutes, RFI, ASI, Submittal/Shop Drawing and Cost Change logs to attendees at the next meeting.
 3. Ascertain that work is prosecuted consistently with contract documents and construction schedules.
- G. At Contractor's option, weekly progress meetings can be held integrally with monthly CPM Scheduling meeting specified herein.
- H. Contractor shall be responsible to provide the following at each meeting:
1. Current (and updated if necessary) Short Interval Schedule as specified in Section 013216 - Construction Progress Schedule.
 2. Current (and updated if necessary) submittal schedule.

1.4 COORDINATION MEETINGS

- A. Contractor shall hold weekly coordination meetings with his subcontractors and suppliers as deemed necessary by the Contractor for coordination of the work. Meetings shall be held on site. The Owner and the Architect will be available to attend such meetings upon request. Refer to Section 013100 - Project Management and Coordination for additional information and requirements pertaining to coordination meetings.
- B. The superintendent of the Contractor and prime subcontractors shall review the Contractor's schedule for the first three (3) months of work and thoroughly review the work required by the Contract Documents for that period. The Contractor shall submit Design Clarification Requests, Requests for Information, or any other type of information requests the Contractor may use, for the three (3) month work period during the first month after Notice To Proceed to minimize any conflicts that might occur when mobilization begins.
 - 1. This process shall continue for each three (3) months, or increments of 3 month work segments until the completion of the Project.
- C. Project coordination meetings are in addition to specific meetings held for other purposes, such as regular progress meetings and special pre-installation meetings.
- D. Request representation at each meeting by every trade currently involved in coordination or planning for the construction activities involved.
- E. Record meeting results and distribute copies to Architect and Owner and to others affected by decisions or actions resulting from each meeting.].

1.5 PRE-INSTALLATION MEETINGS

- A. General: Prior to commencement of work listed below or as otherwise determined by the Architect or Owner, the General Contractor or his general superintendent, the responsible foremen for the subcontractors performing said work, plus all associated sub-subcontractors, suppliers, fabricators, vendors, and others as appropriate, shall attend a meeting for the purpose of establishing a full understanding of the procedures and requirements for the orderly progress of the designated work.
- B. All subcontractors and major suppliers are required to attend these pre-installation meetings prior to commencing work of their respective specifications Section, or as required by related work in other specification sections. Contractor may elect to group several Sections or Divisions to minimize the number of these meetings.
- C. Require attendance of entities directly affecting, or affected by, work of the Section including Contractor's Project Manager and Superintendent with Lead man performing the work, and/or the appropriate Subcontractors/Suppliers/Fabricators.
- D. Contractor shall notify the Architect and Owner of the Contractor's scheduled pre-installation meeting not less than seven (7) days prior to the scheduled start of any of the work listed below so that the Architect and Owner may attend at their option. All applicable submittals as well as the Subcontractor's safety plan and insurance certificates shall have been submitted to and reviewed by the Architect and Owner prior to scheduling this meeting. Refer to individual technical sections for work requiring pre-installation meetings.

- E. Contractor will record, reproduce and distribute copies of minutes prior to the next meeting or within seven (7) days of each meeting to all meeting participants.

1.6 COMMISSIONING MEETINGS

- A. Refer to respective sections of the various general, mechanical and electrical Divisions of the Project Manual for associated commissioning meeting requirements.

1.7 PROJECT CLOSEOUT MEETINGS

- A. For the purpose of attaining project closeout, commencing immediately following established date of Substantial Completion, Contractor's project manager and superintendent and all subcontractors who have outstanding punch list items associated with their work, or as otherwise requested and including all subcontractors involved in the building systems commissioning process, shall attend weekly closeout meetings which shall be held at the jobsite.
- B. Such meetings shall be held to review and discuss the resolution of all punch list items in order to attain Final Completion. Closeout meetings shall continue on a weekly basis until all punch list items have been resolved and Final Completion is attained.

1.8 TRAINING MEETINGS FOR OPERATING INSTRUCTIONS OF OWNER'S PERSONNEL

- A. Refer to Section 017700 for training requirements related to operating instructions of Owner's personnel.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Submittals.
 - 2. Quality assurance.
 - 3. Format for network analysis schedules.
 - 4. Network analysis schedules.
 - 5. Review and evaluation.
 - 6. Updating schedules.
 - 7. Distribution.

1.2 DEFINITIONS

- A. "Day," as used throughout the Contract unless otherwise stated, means "calendar day."
- B. Float: The amount of time between the earliest finish and the latest finish date of an activity or chain of activities on the Critical Path Method (CPM) construction schedule. Float is not for the exclusive use of either the Contractor or the Owner unless otherwise identified in the Contract Documents. Extensions of time for Contract performance will be granted only to the extent that equitable time adjustments to the affected activity or activities exceed the total float time along the affected paths of the currently approved CPM at the time Notice to Proceed was issued for the change.

1.3 SUBMITTALS

- A. All schedule submittals, including schedule updates, will be reviewed jointly by the Owner/Architect and the Contractor. Such review of the Contractor's schedules shall not constitute an approval or acceptance of the Contractor's construction means, methods, or sequencing or its ability to complete the Work in a timely manner. Neither the Owner's nor the Architect's review will relieve the Contractor of the sole responsibility for the accuracy, adequacy, or completeness of the schedule, the logic of the schedule, and/or completion of the Contract requirements in accord with such schedule. Neither Owner's nor Architect's review shall constitute acknowledgment that the relationships between various work items or activity durations are reasonable or appropriate.
- B. Within 10 days after date of Notice to Proceed, submit proposed preliminary diagram defining planned operations for first 60 days of Work, with general outline for remainder of Work.
- C. Participate in review of preliminary and complete diagrams jointly with Architect/Engineer.
- D. Within 20 days after joint review of proposed preliminary diagram, submit draft of proposed complete network diagram for review. Include written certification that major, mechanical and electrical Subcontractors have reviewed and accepted the proposed schedule.
- E. Submit updated schedules with each Application for Payment.

- F. Submit schedules under transmittal letter form specified in Section 013300 - Submittal Procedures. PDF method preferred.
- G. Schedule Updates:
 - 1. Overall percent complete, projected and actual.
 - 2. Completion progress by listed activity and sub-activity, to within five working days prior to submittal.
 - 3. Changes in Work scope and activities modified since submittal.
 - 4. Delays in submittals or resubmittals, deliveries, or Work.
 - 5. Adjusted or modified sequences of Work.
 - 6. Other identifiable changes.
 - 7. Revised projections of progress and completion.
- H. Narrative Progress Report:
 - 1. Submit with each monthly submission of Progress Schedule.
 - 2. Summary of Work completed during the past period between reports.
 - 3. Work planned during the next period.
 - 4. Explanation of differences between summary of Work completed and Work planned in previously submitted report.
 - 5. Current and anticipated delaying factors and estimated impact on other activities and completion milestones.
 - 6. Corrective action taken or proposed.

1.4 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel specializing in CPM scheduling with two years' minimum experience in scheduling construction work of complexity comparable to the Project and having use of computer facilities capable of delivering detailed graphic printout within 48 hours of request.
- B. Contractor's Administrative Personnel: two years' minimum experience in using and monitoring CPM schedules on comparable Projects.
- C. Coordination with Subcontractors and Suppliers:
 - 1. The scheduler shall prepare the Project Schedules and their updates in cooperation with major subcontractors and suppliers.
 - 2. In scheduling work of subcontractors and deliveries by suppliers, the Contractor represents that he has agreement regarding the schedule with those supplying materials and performing the work.
- D. Reliance Upon the Reviewed Schedule:
 - 1. The Progress Schedule, as reviewed by the Architect, will be an integral part of the Contract and will establish interim completion dates for the various activities under the Contract.
 - 2. Should any activity on the critical path not be completed within 15 calendar days after the stated scheduled date, the Owner shall have the right to require the Contractor to expedite completion of the activity by whatever means appropriate and necessary, without additional compensation to the Contractor. In addition, Contractor shall submit a "Recovery Schedule" which shall logically demonstrate method or methods Contractor proposes to get back on schedule within thirty (30) days of said date; i.e., additional tradespersons, shifts, work days, or crews.

3. In addition to above, should any activity be 15 days or more behind schedule, the Owner shall have the right to perform the activity or have the activity performed by whatever method the Owner deems appropriate.
4. Costs incurred by the Owner and the Architect in connection with expediting construction activity under this Article shall be the responsibility of the Contractor.
5. It is expressly understood and agreed that failure by the Owner to exercise the option either to order the Contractor to expedite an activity or to expedite the activity by other means shall not be considered to set a precedent for any other activities.

1.5 FORMAT FOR NETWORK ANALYSIS SCHEDULE

- A. Listings: Reading from left to right, in ascending order for each activity. Identify each activity with applicable Specification Section number.
- B. Diagram Sheet Size: minimum 11 x 17 inches.
- C. Scale and Spacing: To allow for notations and revisions.

1.6 NETWORK ANALYSIS SCHEDULES

- A. Prepare analysis diagrams and supporting mathematical analyses using critical path method.
- B. Illustrate order and interdependence of activities and sequence of Work; how start of given activity depends on completion of preceding activities, and how completion of activity may restrain start of subsequent activities.
- C. Illustrate complete sequence of construction by activity, identifying Work of separate stages or floors. Indicate dates for submittals and return of submittals; dates for procurement and delivery of long lead and critical products; and dates for installation and provision for testing. Include legend for symbols and abbreviations used.
- D. Number and Duration of Activities on the Network Analysis:
 1. Treat each trade or type of work as a separate activity or set of activities on the network analysis. Each activity shall be coded for responsibility (Contractor, Owner, Architect, etc.), Subcontractor, Discipline (Fire Suppression, Plumbing, Mechanical, Electrical, Communications, Roofing, etc.). Each project phase (i.e., 1, 1-A, 2, etc.) shall be scheduled separately.
 2. At a minimum treat each section of the technical specifications as one or more trades or types of work.
 3. Treat submittal, fabrication, delivery, installation, and startup as separate activities for each trade, type of work and item of equipment, including any items procured under any early procurement contracts transferred and/or assigned by Owner, required for performance of Work. The fabrication and delivery activities shall have the appropriate logic ties to submittal/review and construction activities.

4. Submittal and review activities for shop drawings, samples, etc., shall allow reasonable durations for preparation of submittals, submittal review, revisions and re-submittal review. Refer to Section 013300 for specified durations for processing submittals by the Architect and its Consultants, or the Owner and its Consultants, as applicable. Shorter review times for critical submittals may be negotiated on an individual basis. Resubmittals shall have the same review times allotted as the initial submittals. Resubmittal of shop drawings or samples necessitated by required corrections shall not be cause for extension of time. If certain submittals are critical, they shall be so identified at the time of submission to assure priority treatment. The submittal activities shall have the appropriate logic ties to delivery and construction activities.
 5. No activity or task shall be longer than 15 calendar days duration, with shorter durations if they affect other activities. The activities shall show early and late start, early and late finish, and float dates. Break down major tasks into sub-tasks or by area to meet this criteria.
 6. Where activities extend more than 15 days divide activities into logical component activities.
 7. Show on the diagram, as a minimum for each activity, preceding and following event numbers, description of each activity, cost, and activity duration in calendar days.
- E. Mathematical Analysis: Tabulate each activity of detailed network diagrams using calendar dates, and identify for each activity:
1. Preceding and following event numbers.
 2. Activity description.
 3. Estimated duration of activity, in maximum 15-day intervals. Status of critical activities.
 4. Earliest start date.
 5. Earliest finish date.
 6. Actual start date.
 7. Actual finish date.
 8. Latest start date.
 9. Latest finish date.
 10. Total and free float; accrue float time to Owner and to Owner's benefit.
 11. Monetary value of activity, keyed to Schedule of Values.
 12. Percentage of activity completed.
 13. Responsibility.
- F. Required Data: Show complete sequence of construction by activity, indicating critical path of activities, including but not limited to:
1. Date for Notice to Proceed;
 2. Date for Substantial Completion;
 3. Project mobilization;
 4. Operating constraints and sequences specified by Owner;
 5. Shop Drawing, product data, samples, mock-up submittals and reviews, by specification section;
 6. Date for final color selections to not affect the Critical Path;
 7. Provide demolition schedule as indicated in the Construction Documents;
 8. Planned versus actual status for each Work activity;
 9. Material procurement - fabrication, delivery to job site, and installation - of equipment and critical materials;
 10. Fabrication of special material and equipment, its installation and testing;
 11. Utility shutdowns, road closures, etc.;

12. Any intermediate (milestone) completion dates identified in the Contract Documents; include coordination activities as milestones, such as utility tie-ins, outages, Owner furnished items, City inspections, etc.;
 13. Delivery windows for all Owner furnished items. Establish earliest and latest delivery dates in consultation with the manufacturer;
 14. Pre-Installation Meetings;
 15. Contractor transfer of any existing Owner equipment;
 16. Show interrelationships and dependencies including activities of separate contractors;
 17. Long lead items;
 18. Show Building Flush out Milestone Date as specified in Section 018120 - Indoor Air Quality Management Plan.
 19. Testing, commissioning, Owner training sessions, and other close out activities;
 20. Show Construction Change Directives (CCD) and Change Orders (CO) when they impact the critical path of the schedule;
 21. Punch list;
 22. Punch list corrections.
 23. Final cleanup.
 24. All activities by the Architect that affect progress, required dates for completion, or both, for all and each part of the Work.
- G. Analysis Program: Capable of accepting revised completion dates, and of recomputing of scheduled dates and float (Microsoft Project or approved software).
- H. Required Sorts: List activities in sorts or groups:
1. By preceding Work item or event number from lowest to highest.
 2. By longest float, then in order of early start.
 3. By responsibility in order of earliest possible start date.
 4. In order of latest allowable start dates.
 5. In order of latest allowable finish dates.
 6. Contractor's periodic payment request sorted by Schedule of Values list.
 7. List of basic input data-generating report.
 8. List of activities on critical path.
- I. Prepare subschedules for each stage of Work identified in Section 011000 - Summary.
- J. Coordinate contents with Schedule of Values in Section 013300 - Submittal Procedures.
- 1.7 REVIEW AND EVALUATION
- A. Baseline Schedule: The initial Schedule when reviewed by the Architect and Owner shall be identified as the Baseline Schedule and shall be known as Revision 0. Each subsequent reviewed change to the Schedule shall be as a Revision numbered in sequence (Revision 1, 2, 3, etc.). The Baseline Schedule shall be submitted with no progress percentages applied to activities. The first update shall include the preliminary schedule activities and remaining activities updated as of the second monthly pay request.
- B. Participate in joint review and evaluation of schedules with Architect/Engineer at each submittal.

- C. Evaluate Project status to determine Work behind schedule and Work ahead of schedule.
- D. After review, revise schedules incorporating results of review and resubmit within 10 days.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Scope of Preliminary Construction Schedule: The Preliminary Progress Schedule shall detail, at a minimum, all work which will be accomplished in the first 60 calendar days following the Notice to Proceed. The general approach of the balance of the work shall be indicated.
- B. Limitation on Construction:
 - 1. Mobilization and submittals can be in process during the review period.
 - 2. No construction work shall be permitted until the Preliminary Construction Schedule is submitted and reviewed.
- C. Initial Progress Payment: The first pay request will be based on the update of the preliminary schedule. This submittal shall be in the form of three (3) copies of a computer plotted timescaled logic diagram, the accompanying Microsoft Project CD, and hard copy computer reports sorted by activity number, early start and total float.

3.2 COMPLETE CONSTRUCTION SCHEDULE

- A. Progress Payments:
 - 1. Shall be withheld in the absence of a reviewed Construction Schedule.
 - 2. No adjustment or extension of time shall be granted for failure to meet the activity dates as shown. Failure to comply with these requirements shall be cause for rejection of any progress payments presented thereafter, until such time as these requirements are met.

3.3 DISTRIBUTION

- A. Copies of reviewed preliminary Construction Schedule and every reviewed revision thereof shall be submitted electronically review by the: Architect, Owner and everyone whose time performance is essential to achieving the progress shown on the schedule. Notification of these updates shall be emailed to all participants with directions to access web site.

3.4 SHORT INTERVAL SCHEDULE

- A. Prepare a 3-week Short Interval ("look-ahead") Schedule for each progress meeting. Show one (1) prior week of actual progress (planned vs actual performance). Forecast two (2) weeks of start and completion dates for each activity, task or event in comparison to the prepared schedule.

1. Activities in the Short Interval Schedule shall relate directly to activities in the Construction Schedule. Each activity shall be coded with the same ID number, specification number, or other reference the contractor uses on the Construction Schedule. The Short Interval Schedule will have more detail, but each of the details must be related to the Construction Schedule coding.
2. Indicate start, on-going, intermittent and completion for each activity, task, or event.
3. The schedule shall show critical path work, as defined by the Construction Schedule that has been affected by any changed conditions authorized through a change order or field order.

B. Distribute paper copies of the Short Interval Schedule to all attendees at each Progress Meeting.

3.5 UPDATES

A. General:

1. The scheduler shall attend all meetings concerning project progress, alleged delays, or time impact.
2. The schedule shall be modified to reflect the original Contract completion date, subject to review by the Owner. Prior to submittal of the schedule update, the Contractor shall submit an advanced worksheet indicating the intended report status. The Owner, Architect and Contractor shall then meet and agree upon the completion status of the work in progress, and any major logic changes proposed by the Contractor.
3. Maintain the Construction Schedule at the project meeting location and update weekly by drawing a line vertically through the corresponding progress of each task on the schedule as of the date of that project meeting. The line shall be in varying colors so that differentiation between weeks is readily apparent.

B. Progress Meetings:

1. Update the reviewed Construction Schedule at each Progress Meeting.
2. Indicate "actual" progress in percent complete for each activity.
3. At each progress meeting discuss the Short Interval Schedule. Any deviation from the planned schedule shall be explained by Contractor, with corrective measures, if necessary, to bring progress of Work back in line with the Contract Completion date.

C. Monthly Update:

1. Contractor shall submit an updated schedule at progress meeting following either one of the following two occurrences:
 - a. Upon completion of a major milestone; or,
 - b. When the actual work completed is more than two (2) weeks behind schedule. Should the schedule show the project completion to be more than two weeks behind, the Contractor shall submit a written explanation and recovery schedule outlining corrective action taken or proposed to bring events back on schedule within a 30 day period.
2. Show changes occurring since previous schedule submission, such as:
 - a. Any major changes in scope, including authorized or Change Orders;
 - b. Contractor reorganization of his work sequence unrelated to changes in scope;
 - c. Activities modified since previous submission;
 - d. Revised projections for progress and completion, as applicable; and
 - e. Any other identifiable changes.

3. Provide narrative report as needed to define:
 - a. Problem areas, anticipated delay, and impact of these on schedule; and
 - b. Corrective action recommended and its effect.
- D. Subcontractor Participation:
 1. Involve all major subcontractors in preparation of the Periodic Updates of the Construction Schedule.
 2. Obtain approval of the schedule from each major subcontractor and submit in writing together with the Periodic Updates of the Construction Schedule.
- E. Change Orders:
 1. Authorized changes to the work shall be included in the schedule network as they occur in the same format and level of detail as contained in the current updated schedule. Enough activities shall be included to adequately describe the work. Code the activities in such a way that they can be identified to the specific Change Order. Insert the Change Order Activities in the network with appropriate logic ties to original network activities.
 2. Utilize the time impact analysis submitted with the change order to demonstrate the effect of delays on the overall project schedule.

3.6 TIME EXTENSIONS

- A. The Contractor shall notify the Owner and Architect in writing within seven (7) days of the event of any event which could delay performance or supplying of any item of the work affecting the critical path. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Contractor's Construction Schedule, and the action being taken to correct the delay situation.
- B. Extensions of time to the Contractor's Contract may be granted only for delays to activities on the critical path that actually delay the Project Completion beyond the date of Substantial Completion, or for delays to activities that transform that activity onto the critical path, and as a result cause a final completion date beyond the contracted final completion date.
- C. Following receipt of an executed Change Order extending the Contract Time, the activity data and logic relationships shall be incorporated into the current detailed CPM schedule during the next scheduled progress update, as outlined above in Paragraph E "Change Orders" above. In the event the Contractor is entitled to a change in the Contract Time, the adjustment to the contract Time shall be as defined in the General Conditions.

3.7 ABNORMAL INCLEMENT WEATHER

- A. Abnormal Inclement Weather or Unusually Severe Weather: Weather which hinders or prevents work is not a basis for a time extension unless it surpasses in severity the weather reasonably to be expected in the locality at the particular time of year. If a timely notice is filed that a delay was caused by weather sufficiently severe as to entitle additional time, the Contractor is to furnish as promptly as possible thereafter a statement of the portions of the work affected, an explanation as to the reasons work was prevented or hindered by the weather if not readily apparent, the dates on which such portions of work were affected, the total number of days by which the job in its entirety was delayed and any other information which would be of assistance to support the time extension claim such as official weather bureau climatological (www.weather.gov) data for several prior years.

- B. Except for site work which may critically affect the Contract Time, no extension of time will be made for abnormal inclement weather after the principle portions of the Work are sufficiently closed-in (exterior walls up and roof in place) so as to permit any structure, or major portion thereof which is part of the Work, to be adequately heated so as to allow the various trades to perform their work.
- C. If the total calendar days lost due to abnormal inclement weather, from the start of the Work at the Project site by the Contractor until the principle portions of the Work are enclosed, exceeds the total number of days to be expected for the same period, a time extension, if granted, shall only be the number of calendar days needed to equal the excess number of calendar days lost due to such abnormal inclement weather.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes: Administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Submittal procedures.
 - 2. Construction progress schedules.
 - 3. Proposed product list.
 - 4. Product data.
 - 5. Building Product Disclosure Documentation.
 - 6. Use of electronic CAD files of Project Drawings.
 - 7. Shop Drawings.
 - 8. Samples.
 - 9. Other submittals.
 - 10. Test reports.
 - 11. Certificates.
 - 12. Manufacturer's instructions.
 - 13. Manufacturer's field reports.
 - 14. Erection Drawings.
 - 15. Construction photographs.
 - 16. Special job-site submittals.
 - 17. Deferred Submittals.
- B. Contractor review.
- C. Architect/Engineer review.
- D. Consent for release of electronic media.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect/Engineer's and Construction Manager's responsive action.
- B. Informational Submittals: Written and graphic information and physical Samples that do not require Architect/Engineer's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Before submittal of shop drawings, brochures, and lists, Contractor shall carefully review same for proper identification, completeness, correctness, dimensions, and technical applicability to the Contract Document requirements and note all corrections, items needing clarification, additional comments, and the like. Upon thorough review and subsequent acceptance by the Contractor, if so accepted, Contractor is to note its approval together with said notes or amendments thereto for compliance with the Contract Documents by suitable stamp, date and the signature of the Contractor or its authorized representative. Submittals will be returned to the Contractor without action by the Architect if the items submitted are not stamped, signed, and identified as approved or approved as noted or other similar language indicating approval by the Contractor, or if the submittal is obviously not thoroughly reviewed.
- B. Submission of shop drawings and samples shall be accompanied by a transmittal letter containing Project name, Contractor's name, number of drawings and samples, titles and other pertinent data.
- C. Many products are specified by one or more named products/manufacturers. In those circumstances where Contractor submits an unnamed, non-prior approved product/manufacture during this 'shop drawing' phase, said submittal shall be submitted in conformance with Section 012500 - Substitution Procedures.
- D. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Contractor shall provide submittals requiring coordination with other submittals to the Architect at one time. The Architect will review submittals as received, provide comments, and return them to the Contractor. If the Contractor did not submit all submittals requiring coordination at the same time, and a later submittal identifies conflicts, the Contractor will be responsible for all costs associated with changes necessary to properly coordinate the installation of the materials.
 - 3. To avoid the need to delay installation as a result of the time required to process submittals, the Contractor shall anticipate the review times noted in this section and anticipate the possibility of a resubmittal or rejected submittal and the effect that action would have on the Project schedule.
 - a. All required submittals shall be initially received by the Architect within 60 days following the Notice to Proceed date, or sooner as required by the following submittal review times, to meet the Construction Schedule need for materials related to the submittals. Submittals received after these time periods shall not be a cause for delay claims to the Project. Architect will not accelerate review time for submittals received after the indicated time periods, regardless of any potential impact to the Contractor's schedule.

- b. Submittals requiring color selection and material selection are interdependent on receiving all submittals at the same time that have such selection requirements. Allow 20 working days from the date of receipt of the last such submittal by the Contractor for the Architect to complete color selections and mail out from the Architect's office.
 - c. Allow additional 5 working days for submittals requiring Architect consultant review.
 - d. For all other submittals allow 10 working days, after receipt by the Architect, to complete the initial review and mail out from the Architect's office.
 - e. If the Architect must delay processing a submittal to permit coordination with subsequent submittals, the 10 working days will begin upon receipt of the last such coordination submittal from the Contractor.
 - f. If several submittals are provided by the Contractor at the same time, allow 20 working days after receipt by the Architect to complete the initial review and respond. Provide an "Order of Priority List" to the Architect with the submittal.
 - g. If an intermediate submittal is necessary, process the same as the initial submittal.
 - h. Allow 10 working days for reprocessing each submittal after receipt unless noted otherwise.
- E. Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block. Consecutively number each submittal beginning with the number 001.
 - 1. Provide adequate space for the Contractor's stamp and approval, plus a space approximately 4 by 5 inches each on the label or beside the title block on Shop Drawings to record the Architect's review and approval markings and the action taken.
 - 2. Include the following information on the label or title block for processing and recording action taken.
 - a. Project name and job number.
 - b. Date.
 - c. Name and address of the Architect.
 - d. Name and address of the Contractor, subcontractor, supplier and manufacturer as appropriate.
 - e. Number and title of appropriate Specification Section.
 - f. Drawing number and detail references, as appropriate.
- F. Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal form. Submittals received from sources other than the Contractor will be returned through the Contractor without action. Submittals not requested will be returned unprocessed.
 - 1. Address no more than one topic or related topics on a single transmittal (i.e. mechanical items shall not be submitted under same transmittal with electrical items, even though the same Contractor/subcontractor may be responsible for both).
 - 2. Record relevant information, deviations, and requests for data, including minor variations and limitations from the Contract Documents.
 - 3. Shop drawings, product data, samples, and mock-up as required for submissions by the technical specification sections are to be submitted for Architect's review/approval until "No Exception Taken" or "Make Corrections Noted" is obtained. The number of submittals required is noted in parenthesis.
 - a. Shop Drawings: (2) sets; plus one (1) additional set for Structural, Mechanical and Electrical submittals. Or one PDF if transmitted electronically (PDF method preferred).
 - b. Product Data: (2) copies; plus one (1) additional copy for Structural, Mechanical and Electrical submittals. Or one PDF if transmitted electronically (PDF method preferred).

- c. Samples: (3) each.
 - d. Mock-ups: As required by any technical specification section.
 - e. Reference applicable mechanical and electrical technical specifications' sections for additional submittal requirements.
 - 4. Material and Color Submittal: Submit samples of actual colors of materials.
 - 5. Number submittals as follows: Numerical Order, Spec Section and Revision.
 - 6. In the event of the need to "Revise and Resubmit" a submittal, resubmit same in acceptable form/content, clearly identifying deviations from previous submittal content.
- G. Do not transmit submittals directly to Architect's consultants. Architect will review and transmit submittals to consultants for their review.
- H. Prior to submitting transmittals required by Building Code to building code officials and other Authorities Having Jurisdiction (AHJ), transmit submittals to Architect for review and approval.
- I. Maintain copy in project Field Office of each submittal, regardless of status, along with a current Submittal Log,
- 1.4 CONSTRUCTION PROGRESS SCHEDULE SUBMITTALS
- A. Comply with Section 013216 - Construction Progress Schedule
- 1.5 PROPOSED PRODUCT LIST
- A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name and model number of each product.
- B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation and reference standards.
- 1.6 PRODUCT DATA
- A. Product Data: Submit to Architect/Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit electronic submittals via email as PDF electronic files.
- C. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements and location of utility outlets for service for functional equipment and appliances.
- 1.7 BUILDING PRODUCT DISCLOSURE DOCUMENTATION
- A. EPDs are a special type of building product disclosure documentation that demonstrate environmental impact. When required in technical specifications, provide third party certifications for permanently installed products.
- B. Submit electronic submittal via email as PDF electronic files.

1.8 ELECTRONIC CAD FILES OF PROJECT DRAWINGS

- A. Electronic CAD Files of Project Drawings: May only be used to expedite production of Shop Drawings for the Project. Use for other Projects or purposes is not allowed.
- B. Electronic CAD Files of Project Drawings: Distributed only under the following conditions:
 - 1. Use of files is solely at receiver's risk. Architect/Engineer does not warrant accuracy of files. Receiving files in electronic form does not relieve receiver of responsibilities for measurements, dimensions and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy or conflict between information on electronic media and that in Contract Documents, notify Architect/Engineer of discrepancy and use information in hard-copy Drawings and Specifications.
 - 2. CAD files do not necessarily represent the latest Contract Documents, existing conditions, and as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating addenda and modifications.
 - 3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be immediately returned.
 - 4. Receiver shall not hold Architect/Engineer responsible for data or file clean-up required to make files usable, nor for error or malfunction in translation, interpretation or use of this electronic information.
 - 5. Receiver shall understand that even though Architect/Engineer has computer virus scanning software to detect presence of computer viruses, there is no guarantee that computer viruses are not present in files or in electronic media.
 - 6. Receiver shall not hold Architect/Engineer responsible for such viruses or their consequences and shall hold Architect/Engineer harmless against costs, losses or damage caused by presence of computer virus in files or media.
 - 7. **The Contractor is to obtain a Consent for Release of Electronic Media per attached form (an electronic version of this form is available upon request). Subcontractors are to obtain this information from the Contractor and their use of the electronic files is subject to the same conditions.**

1.9 SHOP DRAWINGS

- A. Shop Drawings: Submit to Architect/Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit drawings drawn to accurate scale. Shop drawings are not intended to change the design. Do not reproduce Contract documents or copy standard information for use as Shop Drawings. Standard information prepared without specific references to the project is not a Shop Drawing.
- C. Provide fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurements.
 - 6. Any deviation from contract drawings or specifications.

7. Date when review has to be finalized to meet schedule.
- D. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. Coordination Drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
 1. Preparation of Coordination Drawings is specified in section 013100 and may include components previously shown in detail on Shop Drawings or Product Data.
 2. Contractor is to coordinate the preparation and submittal of Coordination Drawings for all concrete masonry. Include all HVAC, plumbing, sprinkler, electrical, and other work to be coordinated between trades.
 3. Submit Coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.
- F. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
 1. Include signed and sealed calculations to support design.
 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- G. All items shown on shop drawings that do not conform to plans and specifications shall be specifically noted as such (flagged) and brought to the Architect's attention. In any case, the Architect's stamp of review shall not include approval of unauthorized changes in the Contract Documents, except where specific written approval is given.
- H. Contractor is responsible for obtaining and distributing required shop drawings to its subcontractors and material suppliers after, as well as before, final review by the Architect. Prints or PDF's of reviewed shop drawings shall be made from approved submittals which carry the Contractor's and Architect's appropriate stamps. Architect/Owner and applicable consultants and AHJ shall retain copies of each shop drawing submittal.
- I. Submit electronic submittals via email as PDF electronic files.

1.10 SAMPLES

- A. Samples: Submit to Architect/Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Samples for Selection as Specified in Product Sections:
 1. Submit to Architect/Engineer for aesthetic, color and finish selection.
 2. Submit Samples of finishes, textures and patterns for Architect/Engineer selection.
- C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.
 1. Where variation in color, pattern, texture or other characteristics are inherent in the material, submit not less than four (4) units to show approximate limits of the variations.

- D. Include identification on each Sample, with full Project information.
- E. Submit number of samples specified in individual Specification Sections; Architect/Engineer may retain one sample.
- F. Reviewed Samples, which may be used in the Work, are indicated in individual Specification Sections.
- G. Samples will not be used for testing purposes unless specifically stated in Specification Section.
- H. Unless noted otherwise in the relevant technical section of these specifications, remove all samples and mock-ups from the project site, after review and approval by the Owner and Architect.

1.11 OTHER SUBMITTALS

- A. Closeout Submittals: Comply with Section 017000 - Execution.

1.12 TEST REPORTS

- A. Informational Submittal: Submit reports for Architect/Engineer's knowledge as Contract administrator or for Owner.
- B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.13 CERTIFICATES

- A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Architect/Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product but must be acceptable to Architect/Engineer.

1.14 MANUFACTURER'S INSTRUCTIONS

- A. Informational Submittal: Submit manufacturer's installation instructions for Architect/Engineer's knowledge as Contract administrator or for Owner.
- B. Submit printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, to Architect/Engineer in quantities specified for Product Data.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.15 MANUFACTURER'S FIELD REPORTS

- A. Informational Submittal: Submit reports for Architect/Engineer's knowledge as Contract administrator or for Owner.
- B. Submit a PDF report within 5 days of observation to Architect/Engineer for information unless it is needed sooner.
- C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.16 ERECTION DRAWINGS

- A. Informational Submittal: Submit Drawings for Architect/Engineer's knowledge as Contract administrator or for Owner.
- B. Submit Drawings for information assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Architect/Engineer or Owner.

1.17 CONSTRUCTION PHOTOGRAPHS

- A. Provide photographs of Site and construction throughout progress of Work produced by an experienced photographer acceptable to Architect/Engineer.
- B. Submit photographs with Application for Payment.
- C. Take sufficient Site photographs from different directions and sufficient interior photographs indicating relative progress of the Work, 5 days maximum before submitting pay request, to confirm progress.
- D. Identify digital prints with file name. Identify name of Project, contract number, orientation of view, date and time of view and photographer's numbered identification of exposure.
- E. Digital Images: Deliver complete set of digital image electronic files on CD-ROM or other approved media to Architect with project record documents. Identify electronic media with date photographs were taken (not necessary on digital prints). Submit images that have same aspect ratio as sensor, uncropped.
 - 1. Digital Images: Uncompressed JPG or other approved format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and image resolution of not less than 1024 by 768 pixels.

1.18 SPECIAL JOB-SITE SUBMITTALS

- A. Hazardous Chemical Inventory:
 - 1. In order to comply with the State of Washington's Hazard Communication Standard (Chapter 296-800-170 WAC), the Owner requires the Contractor to provide a complete inventory of all potentially hazardous chemicals which the Contractor (including subcontractors) will bring into or produce at the work site. This inventory shall be submitted to the Architect no later than three days prior to the chemicals arrival on site. Specific information for each chemical, in the form of Material Safety Data Sheets (MSDS), and the personal protective equipment required for working with the materials (respirators, special clothing, etc.) shall be included in the submittal.
 - 2. The Contractor shall revise this information as necessary (i.e. when new chemicals are brought onto or produced at the worksite), with updates forwarded to the Architect. A complete and accurate copy of this information shall be immediately available at the Contractor's worksite office for reference by Owner representatives and the Contractor's employees during the Contractor's working hours.
- B. Submit revised inventory monthly or whenever changes are made.

1.19 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve submittals before transmitting to Architect/Engineer.
- B. Contractor: Responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.
 - 2. Determination and verification of field measurements and field construction criteria.
 - 3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
 - 4. Determination of accuracy and completeness of dimensions and quantities.
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences and procedures.
 - 7. Safety precautions.
 - 8. Coordination and performance of Work of all trades.
- C. Stamp, sign or initial and date each submittal to certify compliance with requirements of Contract Documents.
- D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Architect/Engineer.

1.20 ARCHITECT/ENGINEER REVIEW

- A. Do not make "mass submittals" to Architect/Engineer. "Mass submittals" are defined as six or more submittals or items in one day or 20 or more submittals or items in one week. If "mass submittals" are received, Architect/Engineer's review time stated above will be extended as necessary to perform proper review. Architect/Engineer will review "mass submittals" based on priority determined by Architect/Engineer after consultation with Owner and Contractor.

- B. Informational submittals and other similar data are for Architect/Engineer's information, do not require Architect/Engineer's responsive action and will not be reviewed or returned with comment.
- C. Submittals made by Contractor, which are not required by Contract Documents, may be returned without action.
- D. Architect review of submittals does not relieve the Contractor from his responsibilities for conformance with the Contract Documents, proper installation, compliance with applicable codes, or coordination of the Work.
- E. Submittal approval does not authorize changes to Contract requirements unless accompanied by: Change Order, Architect's Supplemental Instruction, Field Order, Substitution Request or Construction Change Directive.
- F. Owner may withhold monies due to Contractor to cover additional costs beyond the second submittal review.
- G. The Architect will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be marked to indicate the action to be taken.
- H. The Architect will distribute the reviewed submittals to:
 - 1. Architect project file and/or Owner.
 - 2. AHJ (as required)
 - 3. Architect sub-consultants.
 - 4. Contractor.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION



CONSENT FOR THE RELEASE OF ELECTRONIC MEDIA

Project:		Recipient:	
Architect's Project No.:		Date:	

The Recipient and the Architect hereby approve the release of electronic media as follows:

1. The Recipient agrees, to the fullest extent permitted by law, to indemnify and hold the Architect and its Consultants harmless from any damage, liability, or cost, including reasonable attorney's fees and cost of defense arising from any reuse or modifications of the electronic media by the Recipient or any person or entity which acquires or obtains the electronic media from or through the Recipient. In no event shall the Architect or its Consultants be liable for any loss of profit or any damages.
2. The Architect and Consultants make no warranties, either express or implied, of merchantability and fitness for any particular purpose.
3. Files are recognized to be subject to alteration, degradation, erosion and erasure. The Recipient is advised to check all electronic media for computer viruses before loading the files. The Recipient agrees to indemnify and hold harmless the Architect and its Consultants from and against all claims of any kind put forth by the Recipient or others as a result of inadvertent viruses transmitted with the electronic files.
4. The electronic files are provided as a convenience to the Recipient and are not considered the Contractual Instruments of Service nor considered "Contract Documents" or "Drawings of Record" or "Construction Documents" or "As-Built Drawings."
5. The Architect and Consultants shall be deemed the authors of the transferred media, and will retain all common law, statutory and other reserved rights, in addition to the copyright. Each party shall have the right to alter, modify or delete materials without consequence to the other party, as long as the changes are not attributed to the other party.
6. The information is for use on this project only and not to be used for other purposes.
7. Recipient agrees to compensate Architect and Consultant reasonable costs for preparation of the electronic files as agreed upon.

Approved by Owner:			
Name:		By:	
Date:		Title:	
Approved by Architect:		Accepted by Recipient:	
Name:	Integrus Architecture, P.S.	Name:	
By:		By:	
Title:		Title:	
Date:		Date:	

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Construction Indoor Air Quality (IAQ) Management Plan.
 - 2. HVAC air filters.
 - 3. Building flush-out.
 - 4. Indoor air quality testing.
- B. Related Sections:
 - 1. Section 019100 - Commissioning: General commissioning requirements.
 - 2. Division 23 - HVAC Air Cleaning Devices: Permanent air filters.

1.2 REFERENCES

- A. American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE):
 - 1. ASHRAE 52.2 - Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size.
- B. Sheet Metal and Air Conditioning National Contractors Association (SMACNA):
 - 1. SMACNA IAQ 2nd Edition 2007 - Guideline for Occupied Buildings under Construction, Chapter 3: Control Measures.
- C. U.S. Environmental Protection Agency (EPA):
 - 1. EPA IAQ Testing - Compendium of Methods for the Determination of Air Pollutants in Indoor Air.
- D. OSPI, Washington Sustainable Schools Protocol (WSSP).

1.3 PLAN REQUIREMENTS

- A. Develop and implement Construction IAQ Management Plan according to SMACNA IAQ as approved by Architect/Engineer for compliance with the following:
 - 1. OSPI, Washington Sustainable Schools Protocol (WSSP) Credit IEQ3.3: Source Control.
- B. Intent:
 - 1. Prevent indoor air quality problems resulting from construction and renovation process.
 - 2. Protect HVAC system during construction and renovation, control pollutant sources, and interrupt contamination pathways.

1.4 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit description and performance data for filters including MERV ratings.

- C. Construction IAQ Management Plan: Submit plan within 15 calendar days following receipt of the Notice to Proceed describing methods and procedures for implementing and monitoring compliance as specified in this Section.
- D. Interior Finishes Installation Schedule: Identify each interior finish that either generates odors, moisture, or vapors or is susceptible to adsorption of odors and vapors, and indicate air handling zone, sequence of application, and curing times.

1.5 CLOSEOUT SUBMITTALS

- A. Section 017000 - Execution: Requirements for submittals.
- B. Project Record Documents:
 - 1. Submit construction photographs showing compliance with Construction IAQ Management Plan.

1.6 CONSTRUCTION IAQ MANAGEMENT PLAN

- A. Implement Construction IAQ Management Plan at start of construction.
- B. Review Construction IAQ Management Plan at preconstruction meeting and progress meetings specified in Section 0131190 - Administrative Requirements.
- C. Distribute approved Construction IAQ Management Plan to Subcontractors and others affected by plan requirements.
- D. Oversee plan implementation, instruct construction personnel about plan compliance, and document plan results.
- E. Address the following requirements in Construction IAQ Management Plan:
 - 1. Meeting or exceeding design approaches of SMACNA IAQ.
 - 2. Permitting adequate airing-out of new materials.
 - 3. Proper curing of concrete before covering.
 - 4. Avoiding building occupancy while construction-related pollutants are present.
 - 5. Smoking inside building.
 - 6. Dust control.
 - 7. Debris removal.

1.7 SEQUENCING

- A. Section 011000 - Summary: Requirements for sequencing.
- B. Sequence material delivery and installation to avoid exposing insulation, carpeting, acoustical ceilings, gypsum board, and other absorptive materials to contamination and moisture.
 - 1. Enclose building before storing and installing moisture-sensitive products within building under construction.

PART 2 PRODUCTS

2.1 HVAC AIR FILTERS

- A. Return Filters: Filtration media rated for minimum efficiency reporting value (MERV) when tested according to ASHRAE 52.2.
 - 1. Construction Return Filters: MERV of 8.
 - 2. Flush-Out Return Filters: MERV of 13.
 - 3. Permanent Filters: As specified in Division 23.

PART 3 EXECUTION

3.1 CONSTRUCTION PROCEDURES - GENERAL

- 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. Delivery and storage of such materials in fully sealed moisture-impermeable packaging.
 - 3. Provide sufficient ventilation for drying within reasonable time frame.
- B. Begin construction ventilation when building is substantially enclosed.
- C. If extremely dusty or dirty work must be conducted inside the building, shut down HVAC systems for the duration; remove dust and dirt completely before restarting systems.
- D. When working in a portion of an occupied building, prevent movement of air from construction area to occupied area or into building HVAC system.
- E. All tools and equipment used within a building return air space shall be equipped with a filter system to reduce the introduction of particulate and odor into the return air.
- F. Fabricated products shall be pre-finished off-site wherever practical and to the greatest extent possible. The use of spray equipment for applying finishes in buildings shall be used only upon approval of Owner.
- G. Do not store construction materials or waste in mechanical or electrical rooms.
- H. Do not perform dusty or dirty work after starting use of return air ducts without intake filters.
- I. During installation of carpet, resilient flooring, paints, furnishings, and other VOC emitting products, provide supplemental (spot) ventilation for at least 72 hours after work is completed and describe these activities in the weekly reports.
- J. Operate HVAC with supply air system only and use exhaust fans to remove air outside of ducted system to avoid contaminating return air ducts.
- K. Conduct regular inspection and maintenance of indoor air quality measures, including ventilation system protection and ventilation rate.

- L. Require VOC safe masks for workers installing VOC emitting products (interior and exterior) defined as products that emit 150 g/L or more.
- M. Use low-toxic cleaning supplies for surfaces, equipment, and worker's personal use.
- N. When dry sanding for gypsum board assemblies, provide the following protection:
 - 1. Isolate the space.
 - 2. Provide plastic sheet separation during sanding.
 - 3. Close and seal all air system devices and ductwork.
 - 4. Sequence construction to avoid contamination of other spaces with gypsum dust.
 - 5. Provide worker protection.

3.2 FILTER INSTALLATION AND REPLACEMENT

- A. Install construction return filter at each return grille before operating permanent air handlers during construction.
- B. Replace filters after completing construction and before conducting building flush-out.
 - 1. Replace construction return filters with flush-out return filters.
- C. Replace filters after conducting building flush-out and before occupancy.
 - 1. Replace flush-out return filters with permanent filters.

3.3 BUILDING FLUSH-OUT

- A. The Contractor shall include a separate milestone date on the CPM Schedule, which indicates the targeted date(s) for start of building flush out process.
- B. Refer to Section 230594.

3.4 IAQ MANAGEMENT PLAN IMPLEMENTATION

- A. The Contractor is required to implement and maintain the approved IAQ Management Plan for the duration of the Project, and to update procedures at any time due to unanticipated building conditions.
- B. Provide reports and photographs of construction IAQ management measures such as protection of ducts and on-site stored or installed absorptive materials. In each report describe and illustrate IAQ measures (installation, effectiveness, upkeep, etc.) during construction along with a description of the SMACNA approach employed.
 - 1. Provide data sheets of filtration media used during construction and installed immediately prior to building flush out and prior to building occupancy.

3.5 CONSTRUCTION PHOTOGRAPHS

- A. Section 013300 - Submittal Procedures: Requirements for construction photographs.
- B. Photograph construction operations to show compliance with SMACNA IAQ and Construction IAQ Management Plan.

1. Take minimum of six photographs on minimum of three different occasions during construction to show consistent adherence with specified requirements.
2. Identify photographs as required in Section 013300 - Submittal Procedures and identify SMACNA IAQ approach illustrated in each photograph.

3.6 FIELD QUALITY CONTROL

- A. Section 017000 - Execution: Field inspecting, testing, adjusting, and balancing.
- B. Conduct baseline indoor air quality testing procedure according to EPA IAQ Testing.
 1. Verify indoor air contaminants do not exceed the following limits:

CONTAMINANT	MAXIMUM CONCENTRATION
Formaldehyde	27 parts per billion
Particulates (PM10)	50 micrograms per cubic meter
Total Volatile Organic Compounds (TVOC)	500 micrograms per cubic meter
4-Phenylcyclohexene (4-PCH)	6.5 micrograms per cubic meter
Carbon Monoxide (CO)	9 parts per million and no greater than 2 parts per million above outdoor levels

- C. Conduct air sample testing according to the following:
 1. Verify interior finishes, including but not limited to millwork, doors, paint, carpet and acoustic tiles, are installed.
 2. Test air quality before occupancy, during normal occupied hours, with building ventilation system starting at normal daily start time and operated at minimum outside air flow rate for occupied mode for duration of air testing.
 3. Test air quality for each portion of building served by separate ventilation system, using minimum one sampling point for each 25,000 sq ft (2,323 sq m), or one sampling point for each contiguous floor area, whichever is larger. Include sampling points in areas with least ventilation and greatest presumed contaminant source strength as directed by **Architect/Engineer or Owner**.
 4. Collect air samples between 3 and 6 feet (900 and 1800 mm) above finished floor. Collect samples over minimum 4-hour period.
- D. When tests indicate contaminants exceed maximum concentration limit, flush affected building area with outside air and retest.
 1. Repeat flushing and retesting until measured contaminant concentrations are less than specified maximum limits.
 2. Take air samples for retests at same location as initial tests.

3.7 REMOVAL

- A. Remove all IAQ measures as well as signs, framing, and supports at completion of project. If an IAQ measure may, in the Contractor's opinion, remain confirm this in advance with the Owner's Representative before leaving it in place.
- B. All testing, adjusting and balancing of systems, including training of Owner's designated personnel, shall be completed after the flush out period. All flush out filtration media must be replaced with required filtration media prior to testing and adjusting of systems.
- C. Actual procedures which are followed during building flush out must receive prior approval from Owner and Architect.
- D. Punch list items which do not affect the mechanical systems may be conducted during this flush out period upon approval of the Owner and Architect.
- E. Upon completion of building flush out, replace all filtration media with MERV 13 filters as determined by ASHRAE 52.2-1999, except the filters solely processing outside air.
- F. Submit a report upon completion of building flush out stating that all procedures stated in the approved IAQ Management Plan have been complied with. This report shall contain all [weekly] reports and photographs, as well as any IAQ management plan activities which occurred during the project. Submit in one electronic copy in MS Word.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality control.
- B. Tolerances.
- C. References.
- D. Labeling.
- E. Mockup requirements.
- F. Testing and inspection services.
- G. Manufacturers' field services.

1.2 QUALITY CONTROL

- A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- C. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
- D. Perform Work using persons qualified to produce required and specified quality.
- E. Products, materials, and equipment may be subject to inspection by Architect/Engineer and Owner at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.
- F. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.
- G. Maintain project superintendent continually on Project site for duration of Work of this Contract. Do not engage project superintendent in work other than Work of this Contract.
- H. Comply fully with manufacturers' instructions, including each step in sequence.

1. Should manufacturers' instructions conflict with Contract Documents; request clarification from Architect before proceeding.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within thirty (30) days of date established for the Notice to Proceed.
 1. Distribution: Distribute schedule to Owner, Architect testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.3 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.
- D. Allow tolerances for thermal expansion and effects of mechanical vibration.

1.4 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.
- C. Obtain copies of standards and maintain on Site when required by product Specification Sections.
- D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- E. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference in reference documents.
- F. Abbreviations and Names: Abbreviations and acronyms are frequently used in the Specifications and other Contract Documents to represent the name of a trade association, standards developing organization, authorities having jurisdiction, or other entity in the context of referencing a standard or publication. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the entities. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade and Professional Associations of the U.S.," which are available in most libraries or a search engine dedicated to construction industry data such as <http://www.4specs.com> or <http://www.arcat.com>.

1.5 LABELING

- A. Attach label from agency approved by authorities having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
- B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label:
 - 1. Model number.
 - 2. Serial number.
 - 3. Performance characteristics.
- C. Manufacturer's Nameplates, Trademarks, Logos, and Other Identifying Marks on Products: Not allowed on surfaces exposed to view in public areas, interior or exterior.

1.6 MOCK-UP REQUIREMENTS

- A. Tests will be performed under provisions identified in this Section and identified in individual product Specification Sections.
- B. Assemble and erect specified or indicated items with specified or indicated attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mockups shall be comparison standard for remaining Work.
- D. Where mockup has been accepted by Architect/Engineer and is specified in product Specification Sections to be removed, remove mockup and clear area when directed to do so by Architect/Engineer.

1.7 MOCK-UP

- A. Integrated Exterior Wall Mock Up: Make corrections as necessary. Accepted mock up may remain as part of work. Refer to:
 - 1. Section 042016 – Concrete Unit Masonry.
 - 2. Section 042113 – Masonry Veneer.
 - 3. Section 061643 – Gypsum Sheathing Board.
 - 4. Section 072113 – Board Insulation.
 - 5. Section 072700 – Air Barriers.
 - 6. Section 072726 – Fluid Applied Air Barriers.
 - 7. Section 074213 – Metal Wall Panels.
 - 8. Section 076200 – Sheet Metal Flashing and Trim.
 - 9. Section 079200 – Joint Sealants.
 - 10. Section 084113 – Aluminum Framed Storefront.
 - 11. Section 092405 – Exterior Acrylic Plaster Panels.
- B. Assemble and erect other individual mock-ups as specified.
- C. Mock-ups not meeting the Architect's approval for minimum workmanship quality shall be redone until such approval has been made. Schedule with sufficient lead time to allow proper review time, and re-fabrication if required.

- D. When accepted, mock-ups will demonstrate minimum standard for the Work.
- E. Where mock-up is specified in individual Sections to be removed, clear area after mock-up has been accepted by Architect.

1.8 TESTING AND INSPECTION SERVICES

- A. Owner will employ and pay for specified services of an independent firm to perform testing and inspection.
- B. Independent firm will perform tests, inspections, and other services specified in individual Specification Sections and as required by Architect/Engineer, Owner or authorities having jurisdiction.
 - 1. Laboratory: Authorized to operate at Project location.
 - 2. Laboratory Staff: Maintain full-time specialist on staff to review services.
 - 3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.
- C. Testing, inspections, and source quality control may occur on or off Project Site. Perform off-Site testing as required by Architect/Engineer or Owner.
- D. Reports shall be submitted by independent firm to Architect/Engineer, Contractor and authorities having jurisdiction, in PDF format indicating observations and results of tests and compliance or noncompliance with Contract Documents.
 - 1. Submit final report indicating correction of Work previously reported as noncompliant.
- E. Concrete test reports shall show time and date samples were taken, specific location of concrete placement, slump, air content, ambient air temperature, concrete temperature, date received by lab, field data submitted by, mix number, delivery ticket number, specified strength requirement, 1-7 day break, 2-28 day breaks, any field cylinder breaks as requested by Special Inspector or Architect, day projected high and low temperatures and weather conditions.
- F. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Architect/Engineer and independent firm 24 hours before expected time for operations requiring services.
 - 2. Make arrangements with independent firm and pay for additional Samples and tests required for Contractor's use.
- G. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work according to requirements of Contract Documents.
- H. Special Inspections: In addition to the testing specified herein, the Owner will employ one or more special inspectors who will provide continuous inspections during construction on the following types of work:
 - 1. Concrete: During the taking of test specimens and placing of reinforced concrete and pneumatically placed concrete. Non-structural slabs on grade and site work concrete fully supported on earth do not require special inspection.
 - 2. Bolts Installed in Concrete and Masonry: During installation of bolts and placing of concrete around such bolts as indicated.

3. Reinforcing Steel: During placing of reinforced steel, for all concrete required to have special inspection by Item No. 1. The Special Inspector need not be present during entire reinforcing steel-placing operations, provided he has inspected for conformance with the approved plans, prior to the closing of forms and final inspection of forms prior to the delivery of concrete to the jobsite.
 4. Welding: All structural welding, including welding of reinforcing steel as indicated.
 5. High-Strength Bolting: During all bolt installations and tightening operations. The Special Inspector need not be present during the entire installation and tightening operation for load indicator bolts, provided he has:
 - a. Inspected the surfaces and bolt type for conformance to plans, specifications and shipping certification prior to start of bolting.
 - b. Observed initial bolting operation for proper sequencing.
 - c. And will, upon completion of all bolting, verify visually all connections.
 6. Structural Masonry: During placing of all masonry units, placement of reinforcement and bar positioners, bolts, inspection of grout space, immediately prior to closing of cleanouts, and during all grouting operations.
 7. Special Grading, Excavation and Filling: During earthwork excavations, grading and filing operations.
- I. The Contractor shall arrange and pay for all inspection and testing required by the Contract Documents except for tests specifically indicated herein as the responsibility of the Owner. The Contractor shall also be responsible for all costs of all inspections and testing including, but not limited to, the following:
1. Re-inspection and/or retesting of Owner provided inspections or testing due to failure.
 - a. Retesting or re-inspection required because of nonconformance with specified or indicated requirements shall be performed by same independent firm on instructions from Architect/Engineer. Payment for retesting or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.
 2. Concrete testing for qualifications of materials and for Contractor's convenience.
 3. Testing required because of changes in materials or proportions at the request of the Contractor.
 4. Contractor's duties for owner provided inspections and tests, as specified.
- J. Agency Responsibilities:
1. Test Samples of mixes submitted by Contractor.
 2. Provide qualified personnel at Site. Cooperate with Architect/Engineer and Contractor in performance of services.
 3. Perform indicated sampling and testing of products according to specified standards.
 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 5. Promptly notify Architect/Engineer and Contractor of observed irregularities or nonconformance of Work or products.
 6. Perform additional tests required by Architect/Engineer.
 7. Attend preconstruction meetings and progress meetings.
- K. Agency Reports: After each test, promptly submit PDF copies of report to Architect/Engineer, Contractor, and authorities having jurisdiction. When requested by Architect/Engineer, provide interpretation of test results. Include the following:
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 Specification Section.
 6. Location in Project.
 7. Type of inspection or test.
 8. Date of test.
 9. Results of tests.
 10. Conformance with Contract Documents.
- L. Limits on Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency or laboratory may not approve or accept any portion of the Work.
 3. Agency or laboratory may not assume duties of Contractor.
 4. Agency or laboratory has no authority to stop the Work.
- M. Approved Fabricator Shop Certificate: Special inspection per IBC Section 1704 shall not be required where the work is done on the premises of a fabricator registered and approved by the Building Official to perform such work without special inspection. Provide a certificate from the Building Official which shows the shop approval.
- N. Non-Approved Fabricator Special Inspection: The Contractor shall reimburse the Owner for the costs incurred for special inspection of fabrication in a non-approved shop.

1.9 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship, startup of equipment, testing, adjusting, and balancing of equipment and commissioning as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations. Observer is subject to approval of Architect/Engineer.
- C. Report observations and Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- D. Refer to Section 013300 - Submittal Procedures, "Manufacturer's Field Reports" Article.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.

3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

- B. Maintain log at Project Site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 ACCEPTABLE TESTING AGENCIES

- A. Testing Agency used to be approved by Owner and Architect.

3.3 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Comply with the Contract Document requirements. See Section 017000 – Execution and Closeout Requirements.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. This section includes administrative and procedural requirements for accomplishing an airtight building enclosure that controls infiltration or exfiltration of air and requirements for testing of building air tightness at Aux Gym and Vestibule.
 - 1. Services include coordination between the trades, the proper scheduling and sequencing of the work, preconstruction meetings, inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.
 - 2. Air Barrier Penetrations: All penetrations of the air barrier and paths of air infiltration / exfiltration shall be sealed.
- B. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- C. Specific quality-control requirements for individual construction activities are specified in the sections of the specifications. Ensure that each subcontractor is adequately and satisfactorily performing the quality assurance documentation, tests and procedures required by each section.
 - 1. Requirements for Contractor to provide an airtight building enclosure is not limited by quality-control services required by Architect, Owner, or authorities having jurisdiction and are not limited by provisions of this section.
- D. Related Sections
 - 1. Section 033000 – Cast in Place Concrete
 - 2. Section 054000 – Cold Formed Metal Framing
 - 3. Section 061643 – Gypsum Sheathing Board.
 - 4. Section 075400 – Thermoplastic Membrane Roofing.
 - 5. Section 072600 – Vapor Retarder.
 - 6. Section 072700 - Air Barriers.
 - 7. Section 072726 – Fluid Applied Air Barriers
 - 8. Section 079200 – Joint Sealants.
 - 9. Section 081214 – Standard Steel Doors.
 - 10. Section 084113 – Aluminum Storefronts.
 - 11. Section 092405 – Exterior Acrylic Plaster Panels.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. E779 – Standard Test Method for Determining Air Leakage Rate by Fan Pressurization.

1.3 RESPONSIBILITIES

- A. Provide coordination of the trades, and the sequence of construction to ensure continuity of the air barrier system joints, junctures and transitions between materials and assemblies of materials and products, from substructure to walls to roof. Provide quality assurance procedures, testing and verification as specified herein. Facilitate inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction or by the Owner.
- B. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
 - 1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

1.4 PERFORMANCE REQUIREMENTS

- A. Overall Building Envelope Performance Requirement:
 - 1. The air leakage of the entire building shall not exceed 0.17 cfm/ft² under a pressure differential of 0.3 in. water gauge (2.0 L/s.m² @ 75 Pa) with the calculated surface area being the sum of the above and below grade building envelope when tested according to ASTM E 779 or ASTM E1827.

1.5 SUBMITTALS

- A. Testing Plan and Procedures.
- B. Submit a certified report, in PDF format, of each inspection, test, or similar service.
 - 1. Submit additional copies of each report directly to the Code Official.
 - 2. Report Data: Reports of each inspection, test, or similar service include, but are not limited to, the following:
 - a. Date of issue.
 - b. Project title and number.
 - c. Name, address, and telephone number of testing agency.
 - d. Dates and locations of samples and tests or inspections.
 - e. Names of individuals making the inspection or test.
 - f. Designation of the Work and test method.
 - g. Identification of product and Specification Section.
 - h. Tested surface area
 - i. Floor area
 - j. Area by volume
 - k. Stories above grade
 - l. Leakage rate
 - m. Complete inspection or test data.
 - n. Test results and an interpretation of test results.
 - o. Ambient conditions at the time of sample taking and testing.
 - p. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
 - q. Name and signature of laboratory inspector.

- r. Recommendations on retesting.
- 3. Submit documents demonstrating testing agency meets qualifications for Air Barrier Testing and Inspection Agencies listed in Quality Assurance below.

1.6 QUALITY ASSURANCE

- A. Qualifications for Air Barrier Testing and Inspection Agencies, including independent testing laboratories:
 - 1. Specializing in the types of air barrier system inspections and tests to be performed.
 - 2. AAMA or NEBB accredited.
- B. Build a mock-up before proceeding with the work, satisfactory to the Architect, of each air-tight joint type, juncture, and transition between products, materials and assemblies.
- C. Pre-installation Meeting:
 - 1. Attendance: Contractor, Installer, Owner, Architect, air barrier manufacturer's representative, designated testing agency, installers representing related work, and those requested to attend.
 - 2. Meeting Time: Arrange minimum 2 weeks prior to beginning work of Air and Moisture Barrier and related sections.
 - 3. Agenda:
 - a. Discuss air barrier system components and sequence of installation.
 - b. Discuss responsibilities at transitions between air barrier assemblies and components.
 - c. Discuss all joints and penetrations and proposed methods for sealing.
 - d. Identify and discuss all special conditions.
 - e. Discuss testing requirements and sequencing.
- D. On-site Inspection:
 - 1. The air barrier system is subject to inspection by the Architect and Commissioning Agent.
 - 2. Provide a minimum of 48 hours notice prior to covering any air barrier system assembly.

PART 2 PRODUCTS

2.1 REGULATORY REQUIREMENTS

- A. Conform to provisions of Washington State Energy Code.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that continuous air barrier system at building envelope is complete and building is ready for air leakage testing procedures.

3.2 PREPARATION

- A. Prevent non-testing personnel access to and from building during testing.

3.3 TESTING AND INSPECTION

- A. Quantitative tests:
 - 1. Provide test reports of all tests performed, in pdf format to the Owner, Contractor and Architect.
 - 2. Conduct in conformance with, ASTM E779, Determining Airtightness of Buildings Air Leakage Rate by Single Zone Air Pressurization.
 - a. Provide all equipment and construction as necessary to perform the test.
- B. A test above 0.15 cfm ft² of the requirements of ASTM E779 will require visual inspection of air barrier for leaks to the extent practicable. An additional report identifying the corrective actions taken to seal air leaks shall be submitted to the building owner and the Code Official.
- C. If the tested rate exceeds 0.40 cfm/ft², corrective actions must be made in coordination with the Architect and the Owner and the test completed again at no cost to the Owner. A test above 0.40 cfm/ft² will not be accepted.

3.4 REPAIR AND PROTECTION

- A. Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Section 017000.
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

3.5 ADJUSTING

- A. Review remedies for defects with Architect.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Protection of Existing Utilities.
 - 2. Temporary Utility Installation.
 - 3. Temporary electricity.
 - 4. Temporary lighting for construction purposes.
 - 5. Temporary heating.
 - 6. Temporary cooling.
 - 7. Temporary ventilation.
 - 8. Communication services.
 - 9. Temporary water service.
 - 10. Temporary sanitary facilities.
- B. Construction Facilities:
 - 1. Field offices and sheds.
 - 2. Vehicular access.
 - 3. Parking.
 - 4. Progress cleaning and waste removal.
 - 5. Project identification.
 - 6. Traffic regulation.
 - 7. Fire-prevention facilities.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Traffic and Pedestrian Obstructions.
 - 3. Enclosures and fencing.
 - 4. Security.
 - 5. Water control.
 - 6. Dust control.
 - 7. Erosion and sediment control.
 - 8. Noise control.
 - 9. Pest and rodent control.
 - 10. Pollution control.
 - 11. Hazardous Material Spills
- D. Removal of utilities, facilities, and controls.

1.2 PROJECT CONDITIONS

- A. Temporary Utilities: Within 15 calendar days of the Notice to Proceed, the Contractor shall submit to the Architect and Owner a schedule and a location sketch indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on site.

1.3 PROTECTION OF EXISTING UTILITIES

- A. Concealed utilities of record are shown on Drawings. These are not necessarily exact with respect to location or completeness.
- B. Notify Owner in writing, on each occasion, of intent to work near or on existing underground utility services or structures that may affect Owner occupied portions of Project Site. Submit procedure for safe and continuous operation of services. Do not proceed prior to approval.
- C. Proceed with sufficient caution to preclude damaging utilities known or unknown. In event unidentified utilities are encountered, promptly notify Owner.
- D. In the event Owner's utilities are damaged during construction, promptly provide temporary services and make repairs to maintain continuity of services at the Contractor's expense.

1.4 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
 - 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
 - 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner. The Owner will not accept cost or use charges as a basis of claims for Change Orders.

1.5 TEMPORARY ELECTRICITY

- A. Provide and pay for power service required from utility source as needed for construction operation.
- B. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters and main distribution switchgear.
 - 1. Install electric power service underground, except where overhead services must be used.
 - 2. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.

- C. Complement existing power service capacity and characteristics as required for construction operations.
- D. Provide power outlets with branch wiring and distribution boxes located as required for construction operations. Provide suitable, flexible power cords as required for portable construction tools and equipment.
- E. Provide main service disconnect and overcurrent protection at convenient location.
- F. Permanent convenience receptacles may be used during construction. Replace any damaged receptacles caused by this use.

1.6 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain lighting for construction operations to achieve minimum lighting level of 2 watts/sq ft.
- B. Provide and maintain after dark for security purposes.
- C. Provide and maintain HID lighting to interior work areas after dark for security purposes.
- D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, lamps, and the like, for adequate lighting levels.
- E. Maintain lighting and provide routine repairs.
- F. Permanent building lighting may be used during construction with Owner approval. Re-lamp all fixtures used for temporary lighting at substantial completion and provide documentation.

1.7 TEMPORARY HEATING

- A. Provide and pay for heating devices and heat as needed to maintain specified conditions for construction operations.
- B. Enclose building before activating temporary heat according to "Enclosures and Fencing" Article in this Section.
- C. Before operating permanent equipment for temporary heating purposes, verify installation is approved for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance and regular replacement of filters and worn or consumed parts. Replace filters at Substantial Completion.
- D. Where construction is in progress, provide a dust free atmosphere and heating for curing, reducing moisture and humidity and suitable temperatures for installation of specified products unless indicated otherwise in specifications. Maintain minimum ambient temperature of 50 degrees F in areas where construction is in progress unless indicated otherwise in individual product Sections.

- E. Portable Heaters: Electric, non-combustion, forced air fan units complete with controls, acceptable to Owner and Architect. Use of heaters that generate moisture or hazardous fumes are prohibited.

1.8 TEMPORARY COOLING

- A. Existing cooling systems shall not be used during construction.
- B. Provide and pay for cooling devices and cooling as needed to maintain specified conditions for construction operations. Provide separate metering and reimburse Owner for cost of energy used.

1.9 TEMPORARY VENTILATION

- A. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity and to prevent accumulation of dust, fumes, vapors or gases.
- B. When hazardous chemicals, mineral-spirit based paints, adhesives, or other similar materials are used, the Contractor shall exhaust toxic, noxious, or odor producing fumes from the building. Method of exhaust shall ensure safety of building occupants and pedestrians in and around the project site. All existing building supply and return air ductwork within the construction area shall be capped air-tight to prevent distribution of fumes throughout the building.
- C. Replace filters, clean and lubricate system prior to acceptance by Owner.

1.10 COMMUNICATION SERVICES

- A. Provide, maintain and pay for telephone service to field office at time of project mobilization. At each telephone, post a list of important telephone numbers.
 - 1. Police and fire departments.
 - 2. Ambulance service.
 - 3. Contractor's home office.
 - 4. Architect's office.
 - 5. Owner's Office.
 - 6. Principal subcontractors' field and home offices.
 - 7. All site phone lines.
- B. Provide mobile telephone or digital pager for superintendent's use, to be operational and kept on his/her person at all times during working hours under this contract.
- C. Internet Service: Provide, maintain, and pay for broadband Internet service to field office at time of Project mobilization. Provide desktop computer with Microsoft operating system and appropriate office function software, modem and printer.
- D. Maintain email address at Field Office with 24 hour automatic message downloading and notification.

1.11 TEMPORARY WATER SERVICE

- A. Provide and pay for suitable quality water service as needed to maintain specified conditions for construction operations.

- B. Install the temporary water service as soon as practicable to provide for the use of this service by all trades. Provide 3/4 inch hose bibs for temporary water needs as required.
- C. Drinking Water: General Contractor to furnish from a proven safe source for all those connected with the work. Pipe or transport in such manner as to keep it clean and fresh. Serve in single service containers or by sanitary drinking fountains.
- D. Extend branch piping with outlets located so that water is available by hoses with threaded connections. Provide temporary pipe insulation and heat tape to prevent freezing.

1.12 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Existing facility use is not permitted. Provide facilities at time of Project mobilization.

1.13 FIELD OFFICES AND SHEDS

- A. Provide Field Office: Weathertight, with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture including: conference table, drawing rack, filing cabinets and drawing display table.
- B. Provide space for Project meetings, with table and chairs to accommodate six persons.
- C. Locate field offices and sheds a minimum distance of 30 feet from existing and new structures.
- D. Construction: Portable or mobile buildings, or buildings constructed with floors raised above ground, securely fixed to foundations with steps and landings at entrance doors.
 - 1. Construction: Structurally sound, secure, weather tight enclosures for office and storage spaces. Maintain during progress of Work; remove enclosures when no longer needed.
 - 2. Thermal Resistance of Floors, Walls and Ceilings: Compatible with occupancy and storage requirements.
 - 3. Exterior Materials: Weather-resistant, finished in color[s] acceptable to Architect/Engineer.
 - 4. Interior Materials in Field Offices: Sheet-type materials for walls and ceilings, prefinished or painted; resilient floors and bases.
 - 5. Lighting for Field Offices: 50 ft-C at desktop height; exterior lighting at entrance doors.
 - 6. Interior Materials in Storage Sheds: As required to provide specified conditions for storage of products.
- E. Environmental Control:
 - 1. Heating, Cooling and Ventilating for Offices: Automatic equipment to maintain comfort conditions.
- F. Storage Areas and Sheds: Size to storage requirements for products of individual Sections, allowing for access and orderly provision for maintenance and inspection of products to suit requirements in Section 016000 - Product Requirements.
- G. Preparation: Fill and grade Sites for temporary structures sloped for drainage away from buildings.
- H. Installation:

1. Install field office spaces ready for occupancy 15 days after date established by Notice to Proceed.
 2. Employee Residential Occupancy: Not allowed on Owner's property.
- I. Maintenance and Cleaning:
1. Weekly janitorial services for field offices; periodic cleaning and maintenance for sheds and storage areas.
 2. Maintain walks free of mud, water, snow and the like.
- J. Removal: At completion of Work remove buildings, foundations, utility services and debris. Restore areas to same or better condition as original condition.

1.14 VEHICULAR ACCESS

- A. Construct temporary access roads from public thoroughfares to serve construction area, of width and load-bearing capacity to accommodate unimpeded traffic for construction purposes.
- B. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
- C. Extend and relocate vehicular access as Work progress requires and provide detours as necessary for unimpeded traffic flow.
- D. Locate as approved by Architect/Engineer.
- E. Provide unimpeded access for emergency vehicles. Maintain 20 foot wide driveways with turning space between and around combustible materials.
- F. Provide and maintain access to fire hydrants and control valves free of obstructions.
- G. Provide means of removing mud from vehicle wheels before entering streets to AHJ standards.
- H. Use designated existing on-Site roads for construction traffic.
- I. Maintain temporary owner vehicular access as identified on sheet G010.

1.15 PARKING

- A. Provide surface parking areas to accommodate construction personnel.
- B. Locate as approved by Architect/Engineer.
- C. If Site space is not adequate, provide additional off-Site parking.
- D. Do not allow heavy vehicles or construction equipment in parking areas.
- E. Do not allow vehicle parking on existing pavement.
- F. Protect existing asphalt parking areas and drive aisles for the duration of construction.
- G. Designate one parking space for Architect/Engineer.

- H. Permanent Pavements and Parking Facilities:
 - 1. Avoid traffic loading beyond paving design capacity. Tracked vehicles are not allowed.
- I. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, ice and the like.
 - 2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water and other deficiencies, to maintain paving and drainage in original condition.
- J. Removal, Repair:
 - 1. Remove temporary materials and construction at Substantial Completion.
 - 2. Remove underground Work and compacted materials to depth of 2 feet; fill and grade Site as indicated.
 - 3. Repair facilities damaged by use, to original condition.

1.16 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces, before enclosing spaces.
- C. Broom and vacuum clean interior areas before starting surface finishing and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from Site weekly and dispose of off-Site. Comply with Section 017419 - Construction Waste Management and Disposal.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- F. Dispose of flammable, hazardous and toxic waste materials on daily bases. Do not permit storage inside buildings.
- G. Provide vehicles to haul materials off site that are constructed and loaded so as to prevent any leaking of materials from the vehicle (RCW 46.61.655). Keep sidewalks, lawns, parking areas and streets clear of all construction materials, debris, gravel, rock and dirt attributed to the General Contractor or the sub-contractors. Clean up these areas on a daily and/or "upon request" basis as determined by the Architect's representative.

1.17 PROJECT IDENTIFICATION

- A. Project Identification Sign:
 - 1. One painted sign, 32-sq ft area, with bottom at 6 feet aboveground.
 - 2. Content:
 - a. Project title and name of Owner.
 - b. Names and titles of authorities.
 - c. Names and titles of Architect/Engineer and Consultants.

- d. Name of Prime Contractor and major Subcontractors.
- 3. Graphic Design, Colors, and Style of Lettering: approved by Architect/Engineer.
- B. Project Informational Signs:
 - 1. Painted informational signs of same colors and lettering as Project identification sign or standard products; size lettering for legibility at 100-foot distance.
 - 2. Provide sign at each field office and storage shed and provide directional signs to direct traffic into and within Site. Relocate as Work progress requires.
 - 3. No other signs are allowed without Owner's permission except those required by law.
- C. Design sign and structure to withstand 60-mph wind velocity.
- D. Sign Painter: Experienced as professional sign painter for minimum of three years.
- E. Finishes, Painting: Adequate to withstand weathering, fading and chipping for duration of construction.
- F. Sign Materials:
 - 1. Structure and Framing: structurally adequate.
 - 2. Sign Surfaces: Exterior grade plywood with medium-density overlay, minimum of 3/4 inches thick, standard large sizes to minimize joints.
 - 3. Paint and Primers: Exterior quality, two coats; sign background of color as selected.
 - 4. Lettering: Precut vinyl self-adhesive products, white.
- G. Installation:
 - 1. Install Project identification sign within 15 days after date established by Notice to Proceed.
 - 2. Erect at approved location of high public visibility adjacent to main entrance to Site.
 - 3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
 - 4. Install sign surface plumb and level, with butt joints. Anchor securely.
 - 5. Paint exposed surfaces of sign, supports and framing.
- H. Maintenance: Maintain clean signs and supports; repair deterioration and damage.
- I. Removal: Remove signs, framing, supports and foundations at completion of Project and restore area.
- J. No other signs are allowed without Owner permission except those required by law.

1.18 TRAFFIC REGULATION

- A. Signs, Signals, and Devices:
 - 1. Post-Mounted and Wall-Mounted Traffic Control and Informational Signs: As approved by authorities having jurisdiction.
 - 2. Traffic Control Signals: As approved by local jurisdictions.
 - 3. Traffic Cones, Drums, Flares, and Lights: As approved by authorities having jurisdiction.
 - 4. Flag Person Equipment: As required by authorities having jurisdiction.
- B. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

- C. Flares and Lights: Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.
- D. Haul Routes:
 - 1. Consult with authorities having jurisdiction and establish public thoroughfares to be used for haul routes and Site access.
 - 2. Confine construction traffic to designated haul routes.
 - 3. Provide traffic control at critical areas of haul routes to regulate traffic and to minimize interference with public traffic.
- E. Traffic Signs and Signals:
 - 1. Provide signs at approaches to Site and on Site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
 - 2. Provide, operate, and maintain traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor's operations.
 - 3. Relocate signs and signals as Work progresses, to maintain effective traffic control.
- F. Removal:
 - 1. Remove equipment and devices when no longer required.
 - 2. Repair damage caused by installation.
 - 3. Remove post settings to depth of 2 feet, compact and finish to match adjacent grade.

1.19 FIRE-PREVENTION FACILITIES

- A. Prohibit smoking within buildings under construction and demolition.
- B. Establish fire watch for cutting, welding, and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
- C. Standpipes: Install minimum of one standpipe for use during construction before building reaches 40 feet in height.
- D. Portable Fire Extinguishers: NFPA 10; 10-pound capacity, 4A-60B: C UL rating.
 - 1. Provide one fire extinguisher at each stairway on each floor of buildings under construction and demolition.
 - 2. Provide minimum of one fire extinguisher in every construction trailer and storage shed.
 - 3. Provide minimum of one fire extinguisher on roof during roofing operations using heat-producing equipment.

1.20 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by authorities having jurisdiction for public rights-of-way.
- C. Protect non-owned vehicular traffic, stored materials, Site, and structures from damage.

1.21 EXISTING TREE AND PLANT PROTECTION

- A. Critical Root Zone: Generally a circular area surrounding a tree, the center of which is the center of the tree trunk and the radius is the distance from the outside of the trunk to any point 12 times the diameter, as measured at 4½ feet from the ground on the low side of the trunk, which point constitutes the circumference of the critical root zone.
- B. Zone of Protection: The area of the critical root zone shall be fenced with no construction related activities allowed within this zone of protection. The restricted activities are, but are not limited to, storage, paving, grading, cutting, filling, travel within, dumping, or spillage of any solid or liquid unless otherwise shown on the Drawings.
- C. During and Post-Construction Requirements:
 - 1. The protective fence shall not be disturbed or removed until all exterior construction has been completed.
 - 2. Water shall be applied periodically until the completion of exterior construction.
 - 3. No rototilling or major soil disturbance shall take place within this zone of protection, before, during, or after the construction.
 - 4. Fertilize deciduous trees as directed by the Landscape Architect every six months during the course of construction and for one year after Final Completion.
 - 5. Prior to Final Completion, prune deciduous trees to remove damaged branches and encourage healthy new growth. Landscape Architect will review complete pruning and direct additional work if it is necessary in his opinion, which work to be done at no additional cost to the Owner.
- D. The Contractor shall protect all trees and other plant types on site from damage until project completion. If any tree or other type of plants are destroyed, disfigured, or damaged so that in Architect's opinion removal is required, Contractor will be assessed damages to include the cost of removal and the cost for replacement of a comparably mature tree or plant including maintenance and a guarantee of replacement if the tree or plant fails to thrive for one full year following Final Completion.
- E. If at any time the Contractor judges that the protection of a tree designated to be saved is incompatible with work required, or if operations necessarily threaten the health of a tree, notify immediately the Architect's representatives and do no further work affecting the tree until a written agreement is reached concerning acceptable procedures.

1.22 TRAFFIC AND PEDESTRIAN OBSTRUCTIONS

- A. Provide signs and/or flagpersons in accordance with WAC 296-155-305 and RCW 47.36.200 for deliveries or operations which obstruct traffic in the street.
- B. Contractor's equipment located on sidewalks or other pedestrian ways shall be suitably barricaded for cane detection as a warning for sight impaired persons. Barricade shall include a horizontal member at a maximum of two feet above the walking surface. Pedestrian traffic will be diverted with appropriate signs, barricades, fences, etc., from any area where contractor equipment or operations may pose a threat to the safety and health of passing pedestrians.

1.23 ENCLOSURES AND FENCING

- A. Construction: approved Contractor's option.
- B. Provide 6-foot-high fence around construction Site; equip with vehicular gates with locks.
 - 1. Post fence with "Danger Hard Hat Area" signs at maximum 50 foot centers.
- C. Exterior Enclosures:
 - 1. Provide temporary insulated, weathertight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual Specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.24 SECURITY

- A. Security Program:
 - 1. Protect Work on existing premises and Owner's operations from theft, vandalism, and unauthorized entry.
 - 2. Initiate program at Project mobilization.
 - 3. Maintain program throughout construction period until directed by Architect/Engineer.

1.25 WATER CONTROL

- A. Grade Site to drain. Maintain excavations free of water. Provide, operate, and maintain necessary pumping equipment.
- B. Protect Site from puddles or running water. Provide water barriers as required to protect Site from soil erosion.

1.26 DUST CONTROL

- A. Execute Work by methods that minimize raising dust from construction operations.
- B. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.27 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills from borrow and waste disposal areas. Prevent erosion and sedimentation.
- B. Minimize surface area of bare soil exposed at one time.
- C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow.
- D. Construct fill and waste areas by selective placement to avoid erosive surface silts and clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.

1.28 NOISE CONTROL

- A. Provide methods, means and facilities to minimize noise produced by construction operations to level required by AHJ.

1.29 PEST AND RODENT CONTROL

- A. Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

1.30 POLLUTION CONTROL

- A. Comply with pollution and environmental control requirements of authorities having jurisdiction.
- B. The Contractor shall exercise every reasonable precaution to protect channels, storm drains, and bodies of water from pollution and shall conduct and schedule its operations so as to minimize or avoid muddying and silting of said channels, drains, and waters. Water pollution control work shall consist of constructing those facilities which may be required to provide prevention, control, and abatement of water pollution. Provide a Stormwater Pollution Prevention Plan (SPPP) as required by the Washington State Department of Ecology. Submit for approval to DOE and make corrections required. Pay the permit fee required by DOE.

1.31 HAZARDOUS MATERIALS SPILLS

- A. If hazardous materials are released on the construction premises, a record of type of materials spilled, quantity, containment, cleanup, decontamination and disposal mechanisms used, reports made to regulatory agencies, and records of regulatory agency activity, if any, shall be kept by the Contractor and provided to Architect.
- B. Contractor and all subcontractors shall immediately report all spills of hazardous materials to Architect.
- C. The Contractor shall be responsible for spill containment, regulatory reporting, cleanup, decontamination, and waste disposal which meets WAC 173-340 and 173-303. See Section 017419 - Construction Waste Management, "Dangerous Waste Management," for additional information regarding disposal of hazardous materials.

1.32 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials before Substantial Completion inspection.
- B. Remove underground installations to minimum depth of 2 feet. Grade Site as indicated on Drawings.
- C. Clean and repair damage caused by installation or use of temporary Work.
- D. Restore facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Prevention of erosion due to construction activities.
2. Prevention of sedimentation of waterways, open drainage ways, and storm and sanitary sewers due to construction activities.
3. Restoration of areas eroded due to insufficient preventive measures.
4. Performance bond.
5. Compensation of Owner for fines levied by authorities having jurisdiction due to non-compliance by Contractor.

1.2 REFERENCE STANDARDS

- A. ASTM D4355 - Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc Type Apparatus; 2007.
- B. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 1999a (Reapproved 2014).
- C. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles; 2011.
- D. ASTM D4632/D4632M - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles; 2015a.
- E. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile; 2012.
- F. ASTM D4873 - Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples; 2002 (Reapproved 2009).
- G. EPA (NPDES) - National Pollutant Discharge Elimination System (NPDES), Construction General Permit; current edition.
- H. City of Kelso – Standard Drawings and Kelso Engineering Design Manual; current edition.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Comply with all requirements of U.S. Environmental Protection Agency for erosion and sedimentation control, as specified for the National Pollutant Discharge Elimination System (NPDES), Phases I and II, under requirements for the 2017 Construction General Permit (CGP), whether the project is required by law to comply or not.
- B. Also comply with all more stringent requirements of City of Kelso Erosion and Sedimentation Control requirements.
- C. Erosion Control Plan and Stormwater Pollution Prevention Plan are owner supplied and shall be modified by a CESCL as necessary. Erosion Control Plans are the minimum requirements for anticipated site conditions. During the construction period, the Erosion Control Plan shall be upgraded as needed for unexpected storm events and to ensure that sediment and sediment-

laden water do not leave the site. If modified, the Contractor's Erosion Control Plan shall meet all requirements of Volume II, Chapter 3 of the current edition of the Washington State Department of Ecology Stormwater Management Manual for Western Washington. Submit periodic inspection reports.

- D. Do not begin clearing, grading, or other work involving disturbance of ground surface cover until applicable permits have been obtained; furnish all documentation required to obtain applicable permits.
- E. Provide to Owner a Performance Bond covering erosion and sedimentation preventive measures only, in an amount equal to 100 percent of the cost of erosion and sedimentation control work.
- F. Timing: Put preventive measures in place as soon as possible after disturbance of surface cover and before precipitation occurs.
- G. Storm Water Runoff: Control increased storm water runoff due to disturbance of surface cover due to construction activities for this project.
 - 1. Prevent runoff into storm and sanitary sewer systems, including open drainage channels, in excess of actual capacity or amount allowed by authorities having jurisdiction, whichever is less.
 - 2. Anticipate runoff volume due to the most extreme short term and 24-hour rainfall events that might occur in 25 years.
- H. Erosion On Site: Minimize wind, water, and vehicular erosion of soil on project site due to construction activities for this project.
 - 1. Control movement of sediment and soil from temporary stockpiles of soil.
 - 2. Prevent development of ruts due to equipment and vehicular traffic.
 - 3. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- I. Erosion Off Site: Prevent erosion of soil and deposition of sediment on other properties caused by water leaving the project site due to construction activities for this project.
 - 1. Prevent windblown soil from leaving the project site.
 - 2. Prevent tracking of mud onto public roads outside site.
 - 3. Prevent mud and sediment from flowing onto sidewalks and pavements.
 - 4. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- J. Sedimentation of Waterways Off Site: Prevent sedimentation of waterways off the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
 - 1. If sedimentation occurs, install or correct preventive measures immediately at no cost to Owner; remove deposited sediments; comply with requirements of authorities having jurisdiction.
- K. Open Water: Prevent standing water that could become stagnant.
- L. Maintenance: Maintain temporary preventive measures until permanent measures have been established.
- M. Contractor shall transfer NPDES Construction Stormwater Permit to the contractor and comply with conditions of approval associated with the NPDES Construction Stormwater Permit.
- N. Update Project Specific SWPPP as project conditions change on site and complete WebDMR's as required by the Construction General Stormwater Permit.

1.4 INFORMATIONAL SUBMITTALS

- A. See Section 01 33 00 - Administrative Requirements, for submittal procedures.
- C. Erosion and Sedimentation Control Plan:
 - 1. Include:
 - a. Site plan identifying soils and vegetation, existing erosion problems, and areas vulnerable to erosion due to topography, soils, vegetation, or drainage.
 - b. Site plan showing grading; new improvements; temporary roads, traffic accesses, and other temporary construction; and proposed preventive measures.
 - c. Where extensive areas of soil will be disturbed, include storm water flow and volume calculations, soil loss predictions, and proposed preventive measures.
 - d. Schedule of temporary preventive measures, in relation to ground disturbing activities.
 - e. Other information required by law.
 - f. Format required by law is acceptable, provided any additional information specified is also included.
 - 2. Obtain the approval of the Plan by authorities having jurisdiction.
 - 3. Obtain the approval of the Plan by Owner.
- D. Certificate: Mill certificate for silt fence fabric attesting that fabric and factory seams comply with specified requirements, signed by legally authorized official of manufacturer; indicate actual minimum average roll values; identify fabric by roll identification numbers.
- E. Inspection Reports: Submit report of each inspection; identify each preventive measure, indicate condition, and specify maintenance or repair required and accomplished.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Grass Seed: See Civil Plan.
- B. Silt Fence Fabric: See WSDOT Section 8-01.3(9)A2 for requirements.
- C. Storm Drain Inlet Protection: See WSDOT Section 8-01.3(9)D for requirements.
- D. Compost: See WSDOT Section 9-14.5(8) for requirements.
- E. Mulching: See WSDOT Section 8-01.3(2) for requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine site and identify existing features that contribute to erosion resistance; maintain such existing features to greatest extent possible.

3.02 PREPARATION

- A. Schedule work so that soil surfaces are left exposed for the minimum amount of time.

3.03 SCOPE OF PREVENTATIVE MEASURES

- A. In all cases, if permanent erosion resistant measures have been installed temporary preventive measures are not required.
- C. Silt Fence: As detailed on plans and in WSDOT Standard Drawings I-30.15-02.
 - 1. Along downhill perimeter edge of disturbed areas, including soil stockpiles.
 - 2. Along the toe of cut slopes and fill slopes.
- D. Storm Drain Drop Inlet Sediment Traps: As detailed on plans and in WSDOT Standard Drawing I-40.20-00.
- E. Compost As detailed on plans and in WSDOT Standard Drawings I-30.20-00 and I80.10-02.
- F. Soil Stockpiles: Protect using one of the following measures:
 - 1. Cover with polyethylene film, secured by placing soil on outer edges.
 - 2. Cover with mulch at least 4 inches thick of pine needles, sawdust, bark, wood chips, or shredded leaves, or 6 inches of straw or hay.
- F. Mulching: Use only for areas that may be subjected to erosion for less than 6 months.
 - 1. Wood Waste: Use only on slopes 3:1 or flatter; no anchoring required.
 - 2. Asphalt: Use only where no traffic, either vehicular or pedestrian, is anticipated.

3.04 INSTALLATION

- A. Mulching Over Small and Medium Areas:
 - 1. Dry Straw and Hay: Apply 4 to 6 inches depth.
 - 2. Wood Waste: Apply 2 to 3 inches depth.
 - 3. Asphalt: Apply 1/4 gallon per square yard.
 - 4. Erosion Control Matting: Comply with manufacturer's instructions.
- B. Temporary Seeding:
 - 1. When hydraulic seeder is used, seedbed preparation is not required.
 - 2. When surface soil has been sealed by rainfall or consists of smooth undisturbed cut slopes, and conventional or manual seeding is to be used, prepare seedbed by scarifying sufficiently to allow seed to lodge and germinate.
 - 3. If temporary mulching was used on planting area but not removed, apply nitrogen fertilizer at 1 pound per 1000 sq ft.
 - 4. On soils of very low fertility, apply 10-10-10 fertilizer at rate of 12 to 16 pounds per 1000 sq ft.
 - 5. Incorporate fertilizer into soil before seeding.
 - 6. Apply seed uniformly; if using drill or cultipacker seeders place seed 1/2 to 1 inch deep.

7. Irrigate as required to thoroughly wet soil to depth that will ensure germination, without causing runoff or erosion.
8. Repeat irrigation as required until grass is established.
- C. Linear Sediment Barriers: Made of silt fences:
 1. Provide linear sediment barriers:
 - a. Along downhill perimeter edge of disturbed areas, including soil stockpiles.
 - b. Along the top of the slope or top bank of drainage channels and swales that traverse disturbed areas.
 - c. Along the toe of cut slopes and fill slopes.
 - d. Perpendicular to flow across the bottom of existing and new drainage channels and swales that traverse disturbed areas or carry runoff from disturbed areas; space at maximum of 200 feet apart.
 - e. Across the entrances to culverts that receive runoff from disturbed areas.
 2. Space sediment barriers with the following maximum slope length upslope from barrier:
 - a. Slope of Less Than 2 Percent: 100 feet.
 - b. Slope Between 2 and 5 Percent: 75 feet.
 - c. Slope Between 5 and 10 Percent: 50 feet.
 - d. Slope Between 10 and 20 Percent: 25 feet.
 - e. Slope Over 20 Percent: 15 feet.

3.05 MAINTENANCE

- A. Inspect preventive measures weekly, within 24 hours after the end of any storm that produces 0.5 inches or more rainfall at the project site, and daily during prolonged rainfall.
- B. Repair deficiencies immediately.
- C. Clean out temporary sediment control structures weekly and relocate soil on site.
- D. Place sediment in appropriate locations on site; do not remove from site.

3.06 CLEAN UP

- A. Remove temporary measures after permanent measures have been installed, unless permitted to remain by Architect.
- B. Clean out temporary sediment control structures that are to remain as permanent measures.
- C. Where removal of temporary measures would leave exposed soil, shape surface to an acceptable grade and finish to match adjacent ground surfaces.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Damaged Products.
- F. General Product Requirements
- G. Equipment electrical characteristics and components.

1.2 PRODUCTS

- A. At minimum, comply with specified requirements and reference standards.
- B. Specified products define standard of quality, type, function, dimension, appearance and performance required.
- C. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.
- D. Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
 - 1. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that does not include premium items.
 - 2. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Schedule delivery of products affecting Progress Schedule critical path to complete project within time of completion stated in the Agreement. Associated cost increases due to failure to meet accelerated delivery schedules and deliveries of long lead time products are responsibility of Contractor.
- B. Coordinate to avoid conflict with work and site conditions. Limit long term site storage, overcrowding of limited storage space, and conflict with available equipment and personnel for handling Products.

- C. Coordinate delivery to limit storage time for Products that are flammable, hazardous, easily damaged, subject to deterioration, or liable for theft or loss.
- D. Transport and handle products according to manufacturer's instructions.
- E. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- F. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE REQUIREMENTS

- A. Store and protect products according to manufacturer's instructions.
- B. Store products with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.
- D. For exterior storage of fabricated products, place products on sloped supports aboveground.
- E. Provide bonded off-Site storage and protection when Site does not permit on-Site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT HANDLING REQUIREMENTS

- A. Provide equipment and personnel necessary to handle Products, including those furnished by Owner, by methods to prevent soiling, damage, or loss of Products and protective packaging.
- B. Provide additional protection during handling as necessary to prevent scraping, marring, and other damage to Products and surrounding surfaces.
- C. Handle Products by methods to prevent bending or overstressing.
- D. Lift heavy components only at designated lifting points.

1.6 DAMAGED PRODUCTS

- A. Promptly remove damaged and deteriorated Products from premises. Replace with new undamaged materials conforming to Contract Documents.

1.7 PRODUCT OPTIONS

- A. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit Request for Substitution for any manufacturer not named, according to Section 012500 - Substitution Procedures.

PART 2 PRODUCTS

2.1 GENERAL PRODUCT REQUIREMENTS

- A. Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
 - 1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 - 2. Standard Products: Where available, provide standard products of types which have been produced and used previously and successfully on other projects and in similar application.
 - 3. Color and Appearance Consistency of Finish Materials: All finish materials of their respective kinds, in regards to construction phasing, shall be consistent in color and appearance throughout the total Project and shall be purchased out of one dye lot, production run, batch, etc., as applicable, for the total Project for each respective material.
- B. Additional Requirements: Material and equipment incorporated in to the work:
 - 1. Shall conform to applicable specifications and standards.
 - 2. Shall comply with size, make, type and quality specified or as specifically approved in writing by Architect.
 - 3. Shall be free of ASBESTOS, FORMALDEHYDE and LEAD.
 - 4. Manufactured and Fabricated Products:
 - a. Manufacture like parts of duplicate units to standard sizes and gauges; parts to be interchangeable.
 - b. Two or more items of the same kind to be identical and by same manufacturer (whether furnished under one Section or more).
 - c. Products shall be suitable for service conditions. Adhere to indicated equipment capacities, sizes, and dimensions unless variations are specifically approved in writing.
 - d. Except where field finishing is specified or otherwise required, products and fabricated items shall be pre-finished off-site.
 - e. Do not use materials and equipment for other than designed or specified purposes and uses.

2.2 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.

- B. Cord and Plug: Furnish minimum 6-foot long cord and plug including grounding connector for connection to electric wiring system. Cord of longer length may be specified in individual Specification Sections or required for actual connection.

PART 3 EXECUTION - Not Used

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Field engineering.
 - 2. Starting of systems.
 - 3. Testing, adjusting, and balancing.
 - 4. Project record documents.
 - 5. Execution.
 - 6. Cutting and patching.
 - 7. Special Procedures
 - 8. Protecting installed construction.
- B. Related Sections:
 - 1. Section 019100 – Commissioning; coordination of testing, adjusting and balancing with Owner’s commissioning agent.

1.2 FIELD ENGINEERING

- A. Verify locations of control points prior to starting work.
- B. Verify setbacks and easements; confirm Drawing dimensions and elevations.
- C. Establish elevations, lines, and levels using recognized engineering survey practices.
- D. Submit copy of Site drawing signed by land surveyor certifying elevations and locations of the Work are in conformance with Contract Documents.
- E. Maintain complete and accurate log of control and survey Work as Work progresses.
- F. Protect survey control points prior to starting Site Work; preserve permanent reference points during construction.
- G. Promptly report to Architect/Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.
- H. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect/Engineer.
- I. Comply with requirements of jurisdictional agencies.

1.3 STARTING OF SYSTEMS

- A. Coordinate schedule for startup of various equipment and systems.
- B. Notify Architect/Engineer seven days prior to startup of each item.

- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify that tests, meter readings, and electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute startup under supervision of manufacturer's representative or Contractors' personnel according to manufacturer's instructions.
- G. When specified in individual Specification Sections, require manufacturer to provide authorized representative who will be present at Site to inspect, check, and approve equipment or system installation prior to startup and will supervise placing equipment or system in operation.
- H. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- I. Starting Systems: The Commissioning Agent shall witness all Startups of equipment required to be commissioned.
- J. Submit a report, PDF format preferred according to Section 013300 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.4 TESTING, ADJUSTING, AND BALANCING

- A. Owner will appoint, employ, and pay for services of independent firm to perform testing, adjusting, and balancing.
- B. Reports will be submitted by independent firm to Architect/Engineer indicating observations and results of tests and indicating compliance or noncompliance with requirements of Contract Documents.
- C. International Energy Conservation Code (IECC)
 - 1. C104.2.1.1 Wall Insulation Inspection
 - 2. C104.2.1.2 Glazing Inspection.
 - 3. C105.2.1.3 Exterior Roofing Insulation
 - 4. C104.2.1.4 Slab/Floor Insulation Inspection
- D. Building Envelope Air Leakage Test (Refer to Section 014100):
 - 1. Conform to current Washington State Energy Code C402.4.1.2.3 for maximum 0.40 cfm/sf at a pressure differential of 0.3 inches water gauge, as tested to ASTM E779 or an equivalent method approved by the Code Official.
 - 2. Conduct testing at a mutually agreeable point of construction as determined by the Owner and Contractor. Testing agency to be employed by Owner.
 - 3. A report that includes the tested surface area, floor area, air by volume, stories above grade, and leakage rates shall be submitted to the Owner and the Code Official.

4. If the tested rate exceeds the allowable amount, a visual inspection of the air barrier shall be conducted and any leaks noted shall be sealed to the extent practicable. An additional report identifying the corrective actions taken to seal air leaks shall be submitted to the Owner and Code Official. Upon submission of corrective actions report to Owner and Code Official, any further requirements to meet the air leakage rate specified in C402.4.1.2.3 will be waived.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on Site one set of the following record documents; record actual revisions to the Work:
 1. Drawings.
 2. Specifications.
 3. Addenda.
 4. Change Orders and other modifications to the Contract.
 5. Reviewed Shop Drawings, product data, and Samples.
 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates used.
 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction as follows:
 1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and change orders.
 2. Include locations of concealed elements of the Work.
 3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components that are parallel to utilities.
 4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
 5. Identify and locate existing buried or concealed items encountered during Project.
 6. Measured depths of foundations in relation to finish floor datum.
 7. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 8. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 9. Field changes of dimension and detail.
 10. Details not on original Drawings.
 11. Provide photographs of congested areas before closed in by Gyp or finishes.
- G. Submit PDF electronic files of marked-up documents to Architect/Engineer before Substantial Completion.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that existing Site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual Specification Sections.
- D. Verify that utility services are available with correct characteristics and in correct locations.
- E. Installer's Inspection of Conditions
 - 1. Require Installer of each major unit of work to inspect substrate to receive the work, and conditions under which the work will be performed, and to report (in writing to Contractor) unsatisfactory conditions.
 - 2. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
- F. Contractor's Inspection. Inspect each item of material or equipment immediately prior to installation, and reject damaged and defective items.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance according to manufacturer's instructions.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 EXECUTION

- A. Comply with manufacturer's installation instructions, performing each step in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
- B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
 - 1. Do not omit any preparatory step or installation procedure unless it is:
 - a. Verified with and accepted by Architect in writing.
 - b. Specifically modified or exempted by Contract Documents.

- C. Perform additional requirements that are specified which are greater than the manufacturer's requirements and do not have a deleterious effect on the product being installed.
- D. Verify that field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
- E. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
 - 1. Secure Work true to line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
 - 2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
 - 3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Architect/Engineer for final decision.
- F. Allow for expansion of materials and building movement.
- G. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
 - 1. Isolate each unit of Work from incompatible Work as necessary to prevent deterioration.
 - 2. Coordinate enclosure of Work with required inspections, photographs and tests to minimize necessity of uncovering Work for those purposes.
- H. Mounting Heights: Where not indicated, mount individual units of Work at industry recognized standard mounting heights for particular application indicated.
 - 1. Refer questionable mounting heights choices to Architect/Engineer for final decision.
 - 2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.
- I. Adjust operating products and equipment to ensure smooth and unhindered operation.
- J. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction period. Lubricate operable components as recommended by manufacturer.

3.4 CUTTING AND PATCHING

- A. Employ skilled and experienced installers to perform cutting and patching.
- B. Submit request in advance of cutting or altering elements affecting:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance or safety of element.
 - 4. Visual qualities of sight-exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching, including excavation and fill to complete Work and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and nonconforming Work.
 - 4. Remove samples of installed Work for testing.

- 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Structural Work: Conform to Structural requirements for cutting of structural members. Do no cutting of structural elements that could reduce structural load capacity, deflection ratio, or integrity of structural systems without prior direction from Structural Engineer.
- E. Plumbing, Heating, Ventilating and Air Conditioning, and Electrical Work: Refer to Division 22, Division 23, and Division 26.
- F. Execute Work by methods to avoid damage to other Work and to provide proper surfaces to receive patching and finishing.
- G. Cut masonry and concrete materials using masonry saw or core drill.
- H. Restore Work with new products according to requirements of Contract Documents.
- I. Fit Work tight to pipes, sleeves, ducts, conduits and other penetrations through surfaces.
- J. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- K. At penetrations of fire-rated walls, partitions, ceiling, or floor construction, completely seal voids with material according to Section 078400 - Firestopping, to full thickness of penetrated element.
- L. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.
- M. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer for decision or remedy.
- N. Leave areas clean and free from debris. Remove spillage, soiling, sealants and overspray from finished surfaces.

3.5 PROTECTING INSTALLED CONSTRUCTION

- A. In-Place Protection
 - 1. General
 - a. During handling and installation of work at project site, clean and protect work in progress and adjoining work on a basis of perpetual maintenance.
 - b. Clean and perform maintenance on newly installed work as frequently as necessary through remainder of construction period.
 - c. Adjust and lubricate moving components to ensure operability without damaging effects. Contractor is responsible for function, condition and unblemished appearance of all work on Project, and any item or work judged defective by Architect shall be subject to replacement at no additional cost to Owner.
- B. To extent possible through reasonable control and protection methods, supervise performance of work in a manner and by means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposures during construction period.

- C. Protect installed Work and provide special protection where specified in individual Specification Sections.
- D. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.
- E. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- F. Use durable sheet materials to protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.
- G. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- H. Prohibit traffic from landscaped areas.
- I. Remove protective devices when no longer needed, prior to completion of work

3.6 SPECIAL PROCEDURES

- A. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces.
- F. Prepare surface and remove surface finishes to permit installation of new work and finishes.
- G. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- H. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original condition.
- I. Refinish existing visible surfaces to remain in renovated rooms and spaces, to specified condition for each material, with neat transition to adjacent finishes.
- J. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- K. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect for review.

- L. Where change of plane of 1/4 inch or more occurs, submit recommendation for providing smooth transition to Architect for review.
- M. Trim existing doors to clear new floor finish. Refinish trim to original condition.
- N. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- O. Finish surfaces as specified in individual product sections.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General Requirement for Recycling and Adaptive Reuse.
 - 2. Construction waste management plan.
 - 3. Construction waste recycling.
 - 4. Construction waste adaptive reuse.

1.2 WASTE MANAGEMENT GOALS

- A. The Owner desires that this project generate the least amount of waste possible and that the Contractor employ processes to minimize the generation of waste due to error, poor planning, breakage, mishandling, contamination, or other factors.
- B. Of the waste material that is generated, as much as economically feasible shall be reused, salvaged, or recycled.
 - 1. Recycle and/or salvage at least 75% of the non-hazardous construction and demolition debris.

1.3 GENERAL REQUIREMENTS FOR RECYCLING AND ADAPTIVE REUSE

- A. The General Contractor shall be responsible for:
 - 1. Sorting, segregating, recycling, and placing designated waste materials into containers, and for disposing of all unacceptable and dangerous wastes as defined below.
 - 2. Furnish waste and recycle collection containers, service those containers, and dispose of solid waste from the project, including unacceptable and dangerous waste.
 - 3. Maintain recycling and adaptive reuse storage and collection area in orderly arrangement with materials clearly separated to eliminate co-mingling of unsuitable materials.
- B. Waste which is disposed of by the General Contractor shall be in accordance with all applicable local, state and federal regulations, including WAC 173-350, Solid Waste Handling Standards, and WAC 173-303, Dangerous Waste Regulations.
 - 1. Onsite recycling bins shall be well marked and easily distinguishable from waste bins. Each recycle bin shall be marked according to its contents.

1.4 PLAN REQUIREMENTS

- A. Develop and implement construction waste management plan as approved by Architect/Engineer and Owner for compliance with WSSP.
- B. Intent:
 - 1. Divert construction, demolition, and land-clearing debris from landfill disposal.
 - 2. Redirect recyclable material back to manufacturing process.
 - 3. Generate cost savings or increase minimal additional cost to Project for waste disposal.

1.5 SUBMITTALS

- A. Section 013300 - Submittal Procedures contains requirements for submittals.
- B. Construction Waste Management Plan: Submit construction waste management plan describing methods and procedures for implementation and monitoring compliance including the following:
 - 1. Transportation company hauling construction waste to waste processing facilities.
 - 2. Recycling and adaptive reuse processing facilities and waste type each facility will accept.
 - 3. Construction waste materials anticipated for recycling and adaptive reuse.
 - 4. On-Site sorting and Site storage methods.
- C. Submit documentation prior to Substantial Completion substantiating construction waste management plan was maintained and goals were achieved.
 - 1. Trash: Quantity by weight deposited in landfills. Include associated fees, transportation costs, container rentals, and taxes for total cost of disposal.
 - 2. Salvaged Material: Quantity by weight with destination for each type of material salvaged for resale, recycling, or adaptive reuse. Include associated fees, transportation costs, container rentals, taxes for total cost of disposal, and reimbursements due to salvage resale.
 - 3. Total Cost: Indicate total cost or savings for implementation of construction waste management plan.

1.6 CONSTRUCTION WASTE MANAGEMENT PLAN

- A. Construction Waste Landfill Diversion: Minimum 75 percent by weight of construction waste materials for duration of Project through resale, recycling, or adaptive reuse.
- B. Implement construction waste management plan at start of construction.
- C. Distribute approved construction waste management plan to Subcontractors and others affected by plan requirements.
- D. Oversee plan implementation, instruct construction personnel for plan compliance, and document plan results.
- E. Dangerous Waste Management:
 - 1. Dangerous waste generated during the project shall be identified, accumulated and disposed in accordance with WAC 173-303. General Contractor generated dangerous waste must be shipped for disposal within 90 days of generation.
 - 2. General Contractor may accumulate dangerous waste in accordance with WAC 173-303 and Washington Department of Ecology Technical Information Memorandum 94-120, Satellite Accumulation (<http://www.ecy.wa.gov/pubs/94120.pdf>). If General Contractor accumulates dangerous waste in greater volume than 55 gal or acutely hazardous waste in greater volume than one quart, General Contractor shall establish and operate a “90-day” accumulation area in accordance with WAC 173-303.

3. General Contractor shall dispose dangerous waste only through vendor(s) approved by owner. General Contractor shall arrange all dangerous waste shipments. Utilization of the vendor and facilities included in the State of Washington Hazardous Waste Disposal contract is authorized. Any other proposed vendor(s) and/or facilities are subject to audit by owner, prior to utilization. General Contractor shall pay for said audits.
- F. Purchase products to prevent waste by:
 1. Ensuring correct quantity of each material is delivered to Site.
 2. Choosing products with minimal or no packaging.
 3. Requiring suppliers to use returnable pallets or containers.
 4. Requiring suppliers to take or buy back rejected or unused items.
- G. Resources for Development of a Waste Management Plan: The following resource is available to assist in developing a waste management plan.
 1. <http://your.kingcounty.gov/solidwaste/greenbuilding/specifications-plans.asp>

1.7 CONSTRUCTION WASTE RECYCLING

- A. Use source separation method or comingling method suitable to sorting and processing method of selected recycling center. Dispose nonrecyclable trash separately into landfill.
- B. Source Separation Method: Recyclable materials separated from trash and sorted into separate bins or containers, identified by waste type, prior to transportation to recycling center.
- C. Comingling Method: Recyclable materials separated from trash and placed in unsorted bins or container for sorting at recycling center.
- D. Materials suggested for recycling include:
 1. Packing materials including paper, cardboard, foam plastic, and sheeting.
 2. Recyclable plastics.
 3. Organic plant debris.
 4. Earth materials.
 5. Native stone and granular fill.
 6. Asphalt and concrete paving.
 7. Wood.
 8. Glass.
 9. Metals.
 10. Gypsum products.
 11. Acoustical ceiling tile.
 12. Carpet.
 13. Equipment oil.

1.8 CONSTRUCTION WASTE ADAPTIVE REUSE

- A. Arrange with processing facility for salvage of construction material and processing for reuse. Do not reuse construction materials on-Site.
- B. Materials suggested for adaptive reuse include:
 1. Concrete and crushed concrete.
 2. Masonry units.

3. Lumber suitable for re-sawing or refinishing.
4. Casework and millwork.
5. Doors and door frames.
6. Windows.
7. Window glass and insulating glass units.
8. Hardware.
9. Acoustical ceiling tile.
10. Equipment and appliances.
11. Fluorescent light fixtures and lamps.
12. Incandescent light fixtures and lamps.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.
- 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.

3.2 CONSTRUCTION WASTE COLLECTION

- A. Collect construction waste materials in marked bins or containers and arrange for transportation to recycling centers or adaptive salvage and reuse processing facilities.
- B. Maintain recycling and adaptive reuse storage and collection area in orderly arrangement with materials separated to eliminate co-mingling of materials required to be delivered separately to waste processing facility.
- C. Store construction waste materials to prevent environmental pollution, fire hazards, hazards to persons and property, and contamination of stored materials.
- D. Cover construction waste materials subject to disintegration, evaporation, settling, or runoff to prevent polluting air, water, and soil.

3.3 CONSTRUCTION WASTE DISPOSAL

- A. Deliver construction waste to waste processing facilities. Obtain receipt for deliveries.
- B. Dispose of construction waste not capable of being recycled or adaptively reused by delivery to landfill, incinerator, or other legal disposal facility. Obtain receipt for deliveries.

3.4 SITE MAINTENANCE

- A. Do not use the Owner's waste containers for construction waste.
- B. Dispose daily of flammable, hazardous and toxic waste materials. Dispose of trash and debris in compliance with governing codes, ordinances, regulations and anti-pollution laws.
- C. Locate dumpster(s) at a site designated by the Owner.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Closeout procedures.
 - 2. Demonstration and instructions.
 - 3. Operation and maintenance data.
 - 4. Spare parts and maintenance products.
 - 5. Product warranties.
 - 6. Final cleaning.
- B. Related Sections:
 - 1. Section 019100 – Commissioning; coordination of testing, adjusting and balancing with Owner's commissioning agent.

1.2 CLOSEOUT PROCEDURES

- A. Prerequisites to Substantial Completion: Complete following items before requesting Certification of Substantial Completion, either for entire Work or for portions of Work:
 - 1. Submit maintenance manuals, Project record documents, digital images of construction photographs and other similar final record data in compliance with this Section.
 - 2. Complete facility startup, testing, adjusting, balancing of systems and equipment, demonstrations and instructions to Owner's operating and maintenance personnel as specified in compliance Contract Documents.
 - 3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or nonconforming Work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
 - 4. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
 - 5. Insurance: Advise Owner of insurance change-over requirements.
 - 6. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
 - 7. Make final change-over of locks and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
 - 8. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
 - 9. Perform final cleaning according to this Section.
- B. Substantial Completion Inspection:
 - 1. When Contractor considers Work to be substantially complete, submit to Architect/Engineer:
 - a. Written certificate that Work, or designated portion, is substantially complete.
 - b. List of items to be completed or corrected (initial punch list).
 - 2. Within seven days after receipt of request for Substantial Completion, Architect/Engineer will make inspection to determine whether Work or designated portion is substantially complete.

3. Should Architect/Engineer determine that Work is not substantially complete:
 - a. Architect/Engineer will promptly notify Contractor in writing, stating reasons for its opinion.
 - b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Architect/Engineer.
 - c. Architect/Engineer will re-inspect Work.
 - d. Redo and Inspection of Deficient Work: Repeated until Work passes Architect/Engineer's inspection.
 4. When Architect/Engineer finds that Work is substantially complete, Architect/Engineer will:
 - a. Prepare Certificate of Substantial Completion on AIA G704 - Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified and amended by Architect/Engineer and Owner (final punch list).
 - b. Submit Certificate to Owner and Contractor for their written acceptance of responsibilities assigned to them in Certificate.
 5. After Work is substantially complete, Contractor shall:
 - a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
 - b. Complete Work listed for completion or correction within time period stipulated.
 6. Owner will occupy portions of building as specified in Section 011000 - Summary.
- C. Prerequisites for Final Completion: Complete following items before requesting final acceptance and final payment.
1. When Contractor considers Work to be complete, submit certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been examined for compliance with Contract Documents.
 - c. Work has been completed according to Contract Documents.
 - d. Work is completed and ready for final inspection.
 2. Submittals: Submit following:
 - a. Final punch list indicating all items have been completed or corrected.
 - b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
 - d. Accounting statement for final changes to Contract Sum.
 - e. Contractor's affidavit of payment of debts and claims on AIA G706 - Contractor's Affidavit of Payment of Debts and Claims.
 - f. Contractor affidavit of release of liens on AIA G706A - Contractor's Affidavit of Release of Liens.
 - g. Consent of surety to final payment on AIA G707 - Consent of Surety to Final Payment Form.
 - h. Other Submittals Not Listed: Submit as required by State and Local agencies, Agreement, and Contracting Requirements.
 3. Perform final cleaning for Contractor-soiled areas according to this Section.
- D. Final Completion Inspection:
1. Within seven days after receipt of request for final inspection, Architect/Engineer will make inspection to determine whether Work or designated portion is complete.
 2. Should Architect/Engineer consider Work to be incomplete or defective:

- a. Architect/Engineer will promptly notify Contractor in writing, listing incomplete or defective Work.
 - b. Contractor shall remedy stated deficiencies and send second written request to Architect/Engineer that Work is complete.
 - c. Architect/Engineer will re-inspect Work.
 - d. Redo and Inspection of Deficient Work: Repeated until Work passes Architect/Engineer's inspection.
- E. Following determination that Work is complete, [Owner's Representative and] Architect will make recommendation to Owner for acceptance of Final Acceptance of Work.
- F. Owner's Representative will issue Final Acceptance letter after determination that requirements for Final Completion have been fulfilled.
- G. Should Owner's Representative and Architect be required to perform more than two reviews for Substantial Completion or Final Completion, due to failure of the Work to conform to completion status claimed by Contractor:
 - 1. Contractor will compensate Owner's Representative and Architect on a time and expense basis at customary hourly rate for each additional review.
 - 2. Compensation will be deducted from Contractor's Final Progress Payment.
 - a.

1.3 DEMONSTRATION AND INSTRUCTIONS

- A. The Contractor must train Owner maintenance personnel in the operation and maintenance of mechanical and electrical equipment and other products identified in Contract Documents. Coordination must be maintained with systems designers for developing the hours of instruction and scope of material to be covered. Training of Owner personnel must not begin until the Architect has approved the final submittal copy of the Operation and Maintenance Manual.
- B. Demonstrate Project equipment instructed by qualified representative who is knowledgeable about the Project.
- C. Video Recordings: Provide high-quality color video recordings of demonstration and instructional sessions. Engage approved videographer to record sessions. Include classroom instructions, demonstrations, board diagrams, and other visual aids.
- D. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- E. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- F. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at designated location.
- G. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

- H. Required instruction time for each item of equipment and system is specified in individual Specification Sections.
- I. At each training session, provide a sign-in sheet for signature of all Owner staff in attendance. Identify the sign-in sheet with the training being provided and the date of the training. Submit the sign-in sheet(s) before Final Acceptance.

1.4 OPERATION AND MAINTENANCE DATA

- A. Submit PDF copy of preliminary draft prior to Substantial Completion. Architect/Engineer will review draft and return one copy with comments. Revise content of document sets as required prior to final submission.
- B. Submit final copy in PDF composite electronic indexed file at Substantial Completion.
- C. Prepare media cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of Project.
- D. Internally subdivide media contents with permanent page dividers, logically organized as described below.
- E. Drawings: Provide scalable PDF copies in media requested.
- F. Contents: Prepare table of contents for media, with each product or system description identified, include the following information:
 - 1. Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Operation and maintenance instructions, arranged by Section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Include the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - g. Safety precautions to be taken when operating and maintaining or working near equipment.
 - 3. Project documents and certificates, including the following:
 - a. Shop Drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. PDF copies of warranties and bonds. Deliver original to Owner in separate bound folder in CSI format.
 - 4. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom-manufactured products.

- a. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
 - b. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance and repair.
 - c. Additional Requirements: As specified in individual product Specification Sections.
5. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
 6. Include test and balancing reports as specified in Section 014000 - Quality Requirements.
 7. Additional Requirements: As specified in individual product Specification Sections.

1.5 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual Specification Sections.
- B. Deliver to place in location as directed by Owner; obtain receipt prior to final payment.

1.6 PRODUCT WARRANTIES

- A. Obtain warranties executed by responsible Subcontractors, suppliers and manufacturers within ten days after completion of applicable item of Work.
- B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information and are notarized.
- D. Co-execute submittals when required.
- E. Include table of contents and assemble in three D side ring binder with durable plastic cover. Maintain a PDF copy for O&M manual at project closeout.
- F. Submit prior to final Application for Payment.
- G. Warranties shall be dated for length of time specified from date of Substantial Completion and will be rejected if dated otherwise.
- H. Time of Submittals:
 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 2. Make other submittals within ten days after date of Substantial Completion, prior to final Application for Payment.
 3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 FINAL CLEANING

- A. Execute final cleaning prior to final Project assessment.
 - 1. Employ experienced personnel or professional cleaning firm.
- B. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces; and vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to sanitary condition with appropriate cleaning materials.
- D. Replace filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts and drainage systems.
- F. Clean Site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from Site.

3.2 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit final accounting statement to Architect making final adjustments to original Contract Sum.
- B. Indicate Original Contract Sum and determine Total Adjusted Contract Sum from additions and deductions resulting from previous Change Orders, Alternates, Unit prices, and other adjustments.
- C. Deduct previous payments from adjusted Contract Sum to determine Total Contract Sum remaining due.
- D. Architect will prepare final Change Order reflecting approved adjustments to Contract Sum not previously made by other Change Orders.

3.3 FINAL APPLICATION FOR PAYMENT

- A. Submit final Application for Payment in accordance with the Contracting Requirements, and procedures and requirements of Owner, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. The information contained in this Section is an overview of Administrative and procedural requirements designed to meet specific Washington Sustainable Schools Protocol (WSSP) sustainability criteria.
- B. Section Includes:
 - 1. Sustainable Project Goals.
 - 2. Washington Sustainable Schools Protocol.
 - 3. Submittal Procedures
 - 4. WSSP Kick-Off Meeting.

1.2 SUSTAINABLE PROJECT GOALS

- A. Refer to Protocol Scorecard for sustainable project goals. Refer to specific specification sections for more detailed requirements.
- B. Provide materials, installations, administrative and management procedures, and other tasks in conformance to WSSP.
- C. Follow attached scorecard as needed to achieve points indicated by WSSP criteria.
 - 1. Provide necessary materials, methods, and documentation.
 - 2. Refer to specified criteria for related Sections for more detailed requirements. Meet or exceed specified safety, health, performance, and durability criteria.
 - 3. Notify Owner and Architect where conflicts may arise between specified criteria and Sustainable Project Goals.
- D. Assist Owner in achieving number of points indicated in attached WSSP Protocol Scorecard.
- E. Conform to performance and administrative requirements of WSSP to assist Owner with documenting submittals related to Sustainable Project Goals.

1.3 WASHINGTON SUSTAINABLE SCHOOLS PROTOCOL

- A. State-funded school construction projects are required to incorporate high-performance features into their school design and construction. The Washington Sustainable Schools Protocol (WSSP) is the tool developed to help school districts comply with these goals. WSSP requirements can be found at:
 - 1. Office of Superintendent of Public Instruction (OSPI),
<http://www.k12.wa.us/SchFacilities/Programs/HighPerformanceSchoolBuildings.aspx>

- B. The system consists of five environmental categories containing required and optional credits. A school project must meet all of the required credits and earn a minimum number of points. School District Planners are encouraged to earn as many points possible and appropriate for a given project above the required threshold of 66 points for Class I districts and 58 points for Class II districts.
- C. The WSSP Scorecard summarizes the requirements and applicable points for each credit. The Scorecard is provided at the end of this Section.

1.4 SUBMITTAL PROCEDURES

- A. Conform to submittal requirements of Section 013300 - Submittal Procedures.
- B. Sustainability Documentation Manual: Prepare electronic submittal.
 - 1. Include following:
 - a. Documentation: Records, calculations, and other material needed to fully, accurately record, and document conformance to products and procedures specified by this Section.
 - b. MSDS information, chain of custody, and other information required for WSSP certification, prepared in formats prescribed by WSSP.
 - 2. Compile submittals as received and processed.
 - 3. Review submittals at each monthly project meeting.
- C. Status Report: Submit on monthly basis.
- D. WSSP Work Plan with Workbook Tabulation Tools Schedule attached for documenting conformance to WSSP requirements.
 - 1. WSSP Work Plan is also available from the OSPI website as an Excel spreadsheet file.
- E. Construction Plans:
 - 1. Construction Waste Management Plan: Indicate analysis of estimated job site waste to be generated, including types and quantities; and proposed alternatives to use of landfill. See Section 017419 - Construction Waste Management and Disposal.
 - a. Submit monthly reports of actual recycling rates, salvage rates, and landfill rates.
 - 2. Construction Indoor Air Quality (IAQ) Plan: Indicate absorptive material and HVAC system protection; source control; pathway interruption; housekeeping and construction sequencing. See Section 013546 – Indoor Air Quality Procedures.

PART 2 PRODUCTS

2.1 PROHIBITED MATERIALS

- A. Do not use materials containing asbestos, polychlorinated biphenyls (PCB), or other hazardous materials.
 - 1. This project seeks to avoid, to the greatest extent possible, materials constructed of or containing these ingredients:
 - a. Formaldehyde, polyvinyl chloride (PVC), Neoprene, cadmium, flame retardant wood treatment, halogenated flame retardants, Creosote, arsenic, or

pentachlorophenol, chlorofluorocarbon (CFC), hydrochlorofluorocarbon (HCFC), petrochemical fertilizers and pesticides, phthalates, mercury, lead, chloroprene (Neoprene), chlorinated polyethylene, and chlorosulfonated polyethylene.

- B. Do not use HCFC-based refrigerants or halon extinguishing agents.
- C. Do not use materials containing butyl for interior locations.

PART 3 EXECUTION

3.1 GENERAL

- A. Employ procedures as needed to meet criteria specified herein. Document same in sufficient manner to prove compliance in requirements.

3.2 INDOOR ENVIRONMENTAL QUALITY

- A. Refer to Section 013546 Indoor Air Quality Procedures.

3.3 WSSP KICK-OFF MEETING

- A. Sustainable Building Design orientation session for construction forces will be scheduled at the Owner's discretion at a mutually agreed date and time between Preconstruction Meeting and start of construction. See Section 013113– Project Meetings. Attendance is required of Owner's Representatives, Commissioning Agent, Architect, Superintendent, General Contractor, project engineers, and representatives of primary subcontractors. Agenda will include:
 - 1. Sustainability principles and WSSP system.
 - 2. Sustainable building features and requirements of this Project.
 - 3. Line items to include in Schedule of Values to assist Owner in identifying costs associated with WSSP.
 - 4. Review of General Contractor's responsibility for quality control related to WSSP.
 - 5. Review of submittals required for WSSP certification.
 - 6. Overview of commissioning process (a pre-commissioning meeting will occur later, in conjunction with a later bid package).

END OF SECTION

WSSP 2018 Scorecard

District: Kelso School District Contact Name & Phone: Scott Westlund (360) 501-1903 Date: 4/1/2021

Project Name and Type: Huntington Middle School, Modernization and Addition D Phase: D5

Category	Group	Credit Number	Credit Name	Possible Points	Yes	No	Maybe
Site 23 points	1) Selection & Use	S1.0	Code Compliance	R			
		S1.1	Sensitive Areas	1	1		
		S1.2	Greenfields	1	1		
		S1.3	Central Location	1			1
		S1.4	Joint Use of On-Site Facilities	1-2	1	1	
		S1.5	Joint Use of Off Site Facilities	1		1	
		S1.6	Minimize Site Disturbance - Building	2	2		
	2) Transportation	S2.1	Public Transportation	1	1		
		S2.2	Bicycle Lanes & Security	1			1
		S2.3	Electric Vehicle Charging Stations	1-2		1	1
		S2.4	Minimize Parking	1			1
	3) Stormwater Management	S3.0	Construction Stormwater Pollution Prevention	R			
		S3.1	On-site Stormwater Management and Flow Control	R-1	R		1
		S3.2	Stormwater Treatment	R-1	R		1
		S3.3	Soil Management	1			1
	4) Outdoor Surfaces	S4.1	Outdoor Learning Spaces	2		2	
		S4.2	School Gardens	1-2	2		
		S4.3	Reduce Heat Island - Site	1		1	
		S4.4	Reduce Heat Island - Roof Design	1	1		
	5) Outdoor Lighting	S5.1	Light Pollution Reduction	1	1		
			Total possible	23	10	6	7
Water 10 points	1) Outdoor Systems	W1.0	Landscape Water Use Budget	R	na		
		W1.1	Irrigation Water Reduction (50%, 100%)	1-2		2	
		W1.2	Control Irrigation Water Use	1		1	
		W1.3	Irrigation System Testing and Training	1		1	
	2) Indoor Systems	W2.0	Lead-Free Potable Water System	1	1		
		W2.1	Potable Water Use Reduction for Sewage (25%, 45%)	1-2	1		1
		W2.2	Potable Water Use Reduction (20%, 30%, 40%)	1-3	1		2
			Total possible	10	3	4	3

Materials and Waste 25 points	1) Waste Reduction and	MW1.0	Storage and Collection of Recyclables and Compostables	R	Yes		
	Efficient Materials Use	MW1.1	Construction Site Waste Management (50%, 75%)	1-2	1		1
		MW1.2	Building Reuse - Structure/Shell (50%, 75%, 95%)	1-3	3		
		MW1.3	Building Reuse - Interior Non-Structural Elements (50%)	1		1	
		MW1.4	Materials Reuse (5%, 10%)	1-2			2
	2) Sustainable Materials	MW2.1	Recycled Content (10%/4 mtl's, 20%/8 mtl's)	1-2			2
		MW2.2	Rapidly Renewable Materials	1	1		
		MW2.3	Certified Wood (50%, Chain of Custody)	1-2			2
		MW2.4	Regional/Local Materials	1-2	1		1
		MW2.5	Environmentally Preferable Products - Multiple Attribute	1-2	2		
		MW2.6	Environmental Product Declaration	2-7	2		5
		MW2.7	Building Materials Health Product Disclosure	1	1		1
				Total possible	25	11	1
Category	Group	Credit Number	Credit Name	Possible Points	Yes	No	Maybe
Energy 60 points	1) Efficiency	E1.0	Minimum Energy Performance				
		E1.0.1	Energy Code Minimum	R	R		
		E1.0.2	Energy Star Certified Equipment	R	R		
		E1.1	Superior Energy Performance - Prescriptive Component Design	2-10	2	8	
		E1.2	Superior Energy Performance - Whole Buidling Design	8-20		20	
		E1.3	Zero Net Energy	35		35	
	2) Building Automation	E2.0	Audio and Visual Systems Control	R	R		
		E2.1	Daylight Responsive Controls	R	R		
		E2.2	HVAC Controls and Operable Windows	1			1
		E2.3	Occupancy Controls				
		E2.3.1	Occupancy Sensor-based Controls	1			1
		E2.3.2	Occupancy Sensor-based Control for Temperature & Airflow	1	1		
		E2.4	Demand Control Ventilation	1			1
		E2.5	Exterior Lighting Motion Detection	2	2		
	3) Alternative Energy	E3.1	On-Site Renewable Energy				
		E3.1.1	On-Site Renewable Energy	2-8		8	
		E3.1.2	Solar Ready	1			1
		E3.1.3	Service Water Heating	2		2	
		E3.1.4	Zero Net Energy Capable	3			3
		E3.2	Combined Heat & Power	4			4
	4) Commissioning	E4.0	Fundamental Commissioning	R	R		
		E4.1	Enhanced Commissioning				
		E4.1.1	Commissioning Review	1	1		
		E4.1.2	Verification and Assurances	1	1		
		E4.1.3	Systems Manual	1			1

5) Metering & Management	E5.0	Minimum Energy Metering	R	R			
	E5.1	Energy Metering - Other					
	E5.1.1	Energy Metering System - Not Code Required	4		4		
	E5.1.2	Additional Use Metering	2			2	
	E5.1.3	Energy Use Metering Display	2			2	
	E5.2	Energy Storage	2			2	
	E5.3	Automated Demand Response					
	E5.3.1	Manage Peak Demand	2			2	
	E5.3.2	Future Demand Response	1			1	
			Total possible	60	7	77	21
Category	Group	Credit Number	Credit Name	Possible Points	Yes	No	Maybe
Indoor Environmental Quality 36 points	1) Daylighting	IEQ1.0	Permanent Shading	R-1	R		1
		IEQ1.1	Outdoor View Windows	R-1	1		
		IEQ1.2	Daylighting Classrooms	1-4		3	1
	2) Electric Lighting Quality	IEQ2.0	Electric Lighting Quality				
		IEQ2.0.1	Electric Lighting Quality	R	R		
		IEQ2.0.2	Electric Lighting Dimming	1	1		
		IEQ2.0.3	Electric Lighting Luminaire Color	1		1	
	3) Indoor Air Quality	IEQ3.0	Min Requirements Ventilation, Filtration, & Moisture Control				
		IEQ3.0.1	Permanent Ventilation	R	R		
		IEQ3.0.2	Increased Ventilation	1			1
		IEQ3.0.3	Evaluate Envelope	1		1	
		IEQ3.1	Low-Emitting Interior Finishes	1-6	2		4
		IEQ3.2	Low-Emitting Furniture	1		1	
		IEQ3.3	Source Control	3			3
		IEQ3.4	Ducted HVAC Returns	1	1		
		IEQ3.5	Particle Arrestance Filtration	1-2	2		
		IEQ3.6	Construction IAQ Management				
		IEQ3.6.1	During Construction	1		1	
		IEQ3.6.2	After Construction	1	1		
		IEQ3.7	Indoor Air Monitoring	2			2
	4) Acoustics	IEQ4.0	Minimum Acoustic Performance	R			
		IEQ4.1	Improved Acoustical Performance				
		IEQ4.1.1	Reduced Unoccupied Classroom Noise All Classrooms	1		1	
		IEQ4.1.2	STC 50 All Classrooms	1		1	
		IEQ4.1.3	Cymnasium Reverberation Times	1		1	
		IEQ4.1.4	Multi-Purpose, Commons, Cafeteria Reverberation Times	1		1	
		IEQ4.2	Audio Enhancement	1	1		
	5) Thermal Comfort	IEQ5.0	Thermal Code Compliance	R			
		IEQ5.1	Radiant Heated Floors - K-5	2		2	
	6) User Controls	IEQ6.1	User Control - Windows	1	1		
		IEQ6.2	User Control - Temperature	1	1		
			Total possible	36	11	13	12

PART 1 GENERAL

1.1 SUMMARY

A. Services Furnished

1. The purpose of commissioning is to provide the Owner assurance that the systems listed in this section (mechanical, electrical & specialty) have been installed in the prescribed manner and will operate properly to fulfill the design intent as laid out in the Contract documents. Commissioning is a systematic process intended to enhance the quality of system start-up and aid in the orderly transfer of systems to beneficial use by the Owner. Commissioning during the construction phase is intended to achieve the following specific objectives according to the Contract Documents:
 - a. Verify that applicable component equipment and systems are installed according to the manufacturer's recommendations and to industry accepted minimum standards and that they receive adequate operational checkout by installing contractors.
 - b. Verify and document proper performance of component equipment and systems with Functional Performance Tests, (FPT).
 - c. Verify that O&M documentation left on site is complete.
 - d. Verify that the Owner's operating personnel are adequately trained.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. General Responsibilities The Contractor verifies installation, provides scheduling and coordination of commissioning activities, performs training, starts up component equipment, performs Pre-verification testing, assists with functional performance testing, corrects deficiencies and assists with retests.
 1. Furnish labor and material to accomplish building commissioning as specified herein.
 2. The commissioning process does not take away from or reduce the responsibility of the system designers or installing contractors to provide a finished and fully functioning product.
 3. Commissioning does not relieve the Contractor of Contract obligations.
- B. The Commissioning Authority (CA), hired directly by the Owner, provides the Owner an unbiased, objective view of the systems; installation, documentation, operation, and performance. The responsibilities of the CA are indicated here for information only.
 1. The CA reviews submittals for compliance with the original design intent as reflected in the contract documents.
 2. The CA will use Facility Grid and Facility Grid app for installation checklists, Start-up, Pre-verification tests, Functional performance tests, and issues log, in addition to other project documentation. Facility Grid and Facility Grid app for issued for the project at no cost to the Contractor.
 3. The CA performs component equipment installation verification throughout the course of the project.
 4. The CA verifies completion of installation and witnesses start up of component equipment

5. The CA develops Functional Performance Tests (FPT) for component equipment and systems listed in this section. These tests when approved will be used as Pre-verification tests by the Contractor to show that all equipment and systems are working correctly.
6. Once the Contractor has completed the Pre-verification tests, the CA, with the assistance of the contractor, performs the Functional Performance tests for the equipment and the systems designated in this section for confirmation that the Pre-verification tests are complete. The tests verify conformance to the sequence of operation and design intent as reflected in the contract documents.
7. The CA will develop and maintain an Issues log through the warranty period.

C. Coordination

1. The Contractor will provide overall coordination of the commissioning program as specified herein. The Commissioning process will require cooperation of the Contractor, subcontractors, vendors, Architect, CA, and Owner. The commissioning team will be comprised of the following:
 - a. Contractor
 - 1) Subcontractors (as required by the Contractor)
 - b. Commissioning Authority (CA)
 - 1) Consultants (as required by the CA)
 - c. Owner's Representative (s)
 - 1) Project Manager
 - 2) Maintenance Staff
 - d. Design Team
 - 1) Architect
 - 2) Mechanical consultant
 - 3) Electrical consultant
 - 4) Specialty consultant (s)

D. Scheduling

1. Integrate commissioning requirements into the Critical Path Method (CPM) master construction schedule. Commissioning scheduling is the responsibility of the Contractor.
2. In the Construction Schedule, the Contractor will schedule Commissioning Tasks. These tasks will include but are not limited to the following:
 - a. Submittals
 - b. Installation Checklists
 - c. Component equipment Start-up
 - d. System Integration
 - e. Functional Performance Testing
 - f. O&M Manuals
 - g. Training
 - h. Other tasks as required, i.e. phasing.
3. The Contractor will provide a copy of the CPM master construction schedule and updates to the CA as part of regular schedule updates and distribution.

E. Commissioning Meetings

1. Commissioning Kick-off Meeting: Within 90 days from Notice to Proceed, the CA will call for a Commissioning Kick-off Meeting. The purpose of this meeting is to give instructions to the contractor on the importance of construction Installation checklists. The use of Facility Grid and the Facility Grid app for completing checklists as work progresses will be discussed and access

issued to each Contractor and Sub-contractor, as needed. The Commissioning process will be explained in detail, including startup procedures, O & M manuals, training, and closeout procedures.

2. Issues related to commissioning will be discussed as required during regularly scheduled Project Meetings. All Issues will be responded to through Faculty Grid.
3. The CA may require additional meetings if the commissioning process appears to be behind schedule or if there are coordination issues.

1.3 COMPONENT EQUIPMENT & SYSTEMS TO COMMISSION

A. Definitions:

1. Component equipment or Component – a constituent element, as of a system, part of a mechanical or electrical complex.
2. System - A group of interacting, interrelated, or interdependent elements forming a complex whole, a condition of harmonious, orderly interaction.
3. Integrate - To make into a whole by bringing all parts together; unify. Many systems are coordinated with or integrated into other systems (fire/smoke dampers with fire alarm). Integration of component equipment into systems, and system-to-system integration will be tested as noted in the matrix

B. Life / Safety Systems

Critical Life Safety Systems are summarized but not limited to the following:

1. Systems:
 - a. Automatic fire protection systems, Division 21
 - b. Emergency lighting
 - c. Fire Alarm systems
 - d. Elevator / wheel chair lifts
 - e. Fire Doors

C. Mechanical Systems

Critical Mechanical systems are identified in the General Conditions, Divisions 22-23, 25 and summarized, but not limited to, the following:

1. Systems:
 - a. HVAC: All HVAC systems including, but not limited to: boilers, chillers, air handling, exhaust & hydronic systems, fan coils valves & pumps.
 - b. Domestic Water & DWV: All domestic water systems including, but not limited to: Water Heaters, pumps, pressure regulators, back-flow preventers, automatic flush valves, automatic faucets, and solenoid valves. All drain, waste and vent systems including interior rain leaders and storm drains
 - c. Controls: The entire temperature control system including, but not limited to: Interface with all hardware devices and component equipment, programming of all specified schedules and sequences of operation, remote site interface.
2. System integration as applicable

D. Electrical Systems

Critical Electrical systems are identified in the General Conditions, Divisions 26-28, and summarized, but not limited to, the following:

1. Systems:
 - a. Unit substations
 - b. MCCs
 - c. Panel Boards: All panel boards including, but not limited to, main & sub-switchboards (480V and 208V) on individual panels.
 - d. Lighting: All lighting fixtures interior and exterior, controls for each, occupancy sensors, daylighting and harvesting controls, low voltage control system connections & interface to energy management system.
 - e. VOIP/Phone/Intercom systems
 - f. PA system
 - g. Data
 - h. Security and Security Notification Systems

1.4 QUALITY ASSURANCE

- A. The matrix below outlines required commissioning activities by system.
- B. The CA is responsible for Functional Performance Testing of the component equipment listed in this section.
- C. As noted in the matrix, testing required by the Architect's Consultants or the Authority Having Jurisdiction (AHJ) will serve as Functional Performance Tests for those systems. The contractor will notify the CA fourteen (14) days in advance of such tests. The CA will witness testing by the Architect's Consultants and the AHJ to assure that they are adequate to completely test the systems. If the CA is unavailable at the scheduled time and location of the activity, so note, and proceed per schedule.
 1. The Contactor will provide the CA with copies of the results of testing performed by others and within three (3) working days of the test. A list of corrections (if required) will be included.
 2. If the CA determines that the tests are not adequate to exercise all functions of the system, the CA will develop additional tests and test the system to assure the owner that the system is completely functional.

SYSTEM	Submittals	Installation Checklists	Start-up	System Integration	Pre-Verification Tests	Functional Performance Tests	Consultant/AHJ Sign off	O&M Manuals	Training
Fire/ Life / Safety Systems									
Auto fire protection systems	X	X	X	X			X	X	X
Emergency lighting	X	X	X	X			X	X	X
Fire Alarm systems	X	X	X	X			X	X	X
Fire Doors	X	X	X	X			X	X	X

Specialty Systems									
Food Services – General									
Component equipment	X	X	X				X	X	X
Refrigeration	X	X	X	X			X	X	X
Class I & II Hoods	X	X	X	X	X	X	X	X	X
HVAC systems									
HVAC	X	X	X	X	X	X	X	X	X
Domestic water system	X	X	X	X	X	X	X	X	X
Controls	X	X	X	X	X	X	X	X	X
Electrical Systems									
Unit substations	X	X	X	X			X	X	X
MCCs	X	X	X	X			X	X	X
Panel Boards/sub panels	X	X	X	X			X	X	X
Lighting	X	X	X	X	X	X	X	X	X
Lighting Controls	X	X	X	X	X	X	X	X	X
CATV	X	X	X	X			X	X	X
VOIP/Phone systems	X	X	X	X	X		X	X	X
Public Address systems	X	X	X	X			X	X	X
Data cable/MDF/IDF	X	X	X	X	X		X	X	X
Security and Notification Systems	X	X	X	X	X		X	X	X

1.5 SUBMITTALS

A. Normal Submittals

1. The CA will receive a copy of the normal submittals for all component equipment or systems to be commissioned, (see matrix above).
2. The CA will review and approve normal Contractor submittals applicable to systems being commissioned for compliance with design intent, concurrent with the A/E reviews.
3. The CA will receive any manufacturer's installation or start-up checklists with the submittal package for any commissioned equipment.
4. The CA may request further documentation necessary for the commissioning process.
5. Contractor's responsibility for deviations in submittals from requirements of the Contract Documents is not relieved by the CA's review.

B. Installation Checklists

1. Contractor will utilize Installation Checklists provided through the Facility Grid app for any commissioned Division. Installation Checklists are used to track proper and complete installation, start up and system integration of each component and each system being commissioned.
 - a. The Contractor will be required to use Facility Grid Mobile app for filling out the installation checklists. Training will be available for use of the mobile app at no charge to the Contractor. The Facility Grid app allows all project participants to work on their projects in the field

without internet connection. The Facility Grid app works for each of the three most popular mobile platforms: iOS, Android and Microsoft.

- b. The Contractor will syncretize the app when the internet is available. The entries are time stamped for transparency.
2. CA will verify with Facility Grid that the Installation Checklists are being completed and if work has not progressed sufficiently, equipment started up may be delayed.

C. Startup Plan

1. Develop a project startup plan for all components and systems to be commissioned. Commence with component start-up after CA & Architect has approved the start-up plan and the CA has reviewed the installation checklists for completion.
2. The Contractor will witness system start-up and repair all system and component deficiencies noted during start-up.
3. The CA, the Architect's consultant (s), and / or the Owner's Representative will witness all start-up and test activities specified in this Section. The CA will designate witnesses and alternates for each activity.
4. Obtain the signature of designated witness on all data forms. If the witness is unavailable at the scheduled time and location of the activity, so note, and proceed per schedule without witness.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION

3.1 INSTALLATION CHECKLISTS

A. Installation Checklists and Installation Verification

1. The Contractor will install all equipment in accordance with the Contract Documents. The Contractor will track, using Facility Grid and the Facility Grid app, the installation of all component equipment and systems being installed as listed in this section. Tracking will be done as the work progresses using the Installation Checklists located on the Facility Grid app for all commissioned Divisions in this Specification Set.
2. The Installation Checklists are listed for each component or system. The installation checklists will be maintained and up dated on the Facility Grid app.
3. During on-site visits, the CA will perform a quality review of the work being completed. This may include a review of the installation checklists on the Faculty Grid app to ensure the work is being accomplished according to the contract documents.
4. If issues are found, the contractor will be notified of the issues and will be responsible for rechecking all components and systems affected. Once this is accomplished, the CA will re-verify the checklists for compliance with the contract documents.
 - a. The level of urgency will be indicated along with a resolution due date.

5. The actual completed installation checklists for each component being started will be available to the CA for review on the Facility Grid app. The CA will check the progress of the Installation Checklists prior to Startup and Commissioning. Startup will not proceed without the approval of the CA.
6. Minor equipment issues will be listed on the Installation checklist and a complete list of issues for all equipment to be started will be available to the CA prior to start up.
 - a. The Contractor will be responsible for completion of all work including change orders and punch list items to the satisfaction of the Owner's Representative and Architect.
7. If any work is found to be incomplete, inaccessible, incorrect, or non-functional, make note of deficiencies and correct deficiencies before system start-up work proceeds.
8. Each checklist will have a place for the person doing the checkout to sign and date each item indicating the task has been completed.

3.2 SYSTEM START-UP

- A. Project Start-up Plan: At least 14 days prior to start-up, submit to the Commissioning Team for review and approval, a Project start-up plan for all equipment to be commissioned, consisting of the following items:
 1. Project Name
 2. Date and time of planned start-up
 3. System and component equipment name(s)
 4. Component equipment location and ID number
 5. Participating parties
 6. A copy of the specification section and manufacturer's installation instructions describing the start-up requirements
 7. The specific sequence of operations or other specified parameters being used during the start-up process.
 8. Specific step-by-step procedures to execute the start-up, in a clear, sequential and repeatable format for each component in the system.
 9. Special cautions, alarm limits, load restrictions, etc.
 10. The Contractor will take corrective action on all system deficiencies noted and demonstrate suitable system operation.
 11. Owner's Representative and CA will physically witness start-up procedures. Contractor will obtain signature of the Owner's Representative and CA indicating successful start-up.
- B. Notify the Commissioning Team in writing seven (7) days prior to component equipment start-up with an agenda that will include the date, time, location, and anticipated duration for each piece of component equipment and/or system to be started.
- C. Provide written notice a minimum of 72 hours in advance of any changes in date, time, location, or anticipated duration of start-up activities. All participants of the Commissioning team will receive notice. Contractor will reimburse Owner for actual costs incurred by the Owner as a result of failure to provide timely notice.

3.3 SYSTEM INTEGRATION & PRE-VERIFICATION TESTING

- A. After successful start up of each component being commissioned, the contractor will continue to utilize Facility Grid for installation checklist and other applicable documentation to verify the integration of individual components into a fully functional system through the BAS or other means of control or automation.
- B. Perform Pre-Functional Testing. It is required that the Contractor obtain the approved Pre-verification Tests from the Facility Grid app and perform the PVTs to verify complete and correct component and system operation prior to formal FPT by the CA. Refer to 'Cost of Retesting' in Part 3 of this section.

3.4 SUBSTANTIAL COMPLETION

- A. General: See Division 01 for Closeout Procedures for all requirements related to Project Closeout and Substantial Completion.
- B. The CA must provide approval for Substantial Completion to the Architect before Substantial Completion can be issued.
- C. Substantial Completion in the Commissioning process requires that:
 - 1. All startup of commissioned component equipment and systems must be complete and approved
 - 2. All installation checklists are complete and approved
 - 3. Pre-Verification Tests have been completed by the Contractor.
 - 4. O&M Manuals are complete, approved, and one copy on site.
 - 5. The Training Plan is complete and approved.
 - 6. Functional Performance Testing must be scheduled, but does not need to be completed before Substantial Completion is issued.

3.5 FUNCTIONAL PERFORMANCE TEST PROCEDURES

- A. Objectives and Scope: Functional testing facilitates bringing the systems from a state of substantial completion to full dynamic operation. Additionally, during the testing process, areas of deficient performance are identified and corrected. A representative sample of each system will be tested in all modes of operation (seasonal, occupied, unoccupied, warm-up, cool-down, part- and full-load) where there is a specified system response. Tests will verify proper responses to standard operating modes as well as failure and alarm conditions. Specific requirements are given in other commissioned sections.
- B. Development of Test Procedures:
 - 1. Tests will be developed by the CA and will be based on the specifications and Sequence of Operations provided in these documents.
 - 2. Before the CA prepares final test procedures, the Contractor will provide to the CA all documentation and a current list of change orders affecting component equipment or systems, control sequences and parameters.
 - 3. Each subcontractor or vendor responsible for component equipment or systems being tested will provide assistance to the CA in developing the FPT procedures. This assistance will be in the form of answering questions, providing documentation, etc.

4. 30 days after final submittal approval, the CA will provide a copy of the test procedures using Facility Grid to the Architect and Contractor, who will review the tests for feasibility, safety, component, and warranty protection. The contractor and Architect's Consultant will respond with approval or revisions within 2 weeks of receiving the proposed tests by using the Facility Grid app.

C. Execution of Testing:

D.

1. FPT begins after all component equipment and systems are started up, pre-verification tests are run, and TAB and all controls work is complete.
2. Testing may proceed on finished systems for which TAB has been completed before all building systems are finished at the discretion of the CA. CA must have a draft balance report for such systems before testing can proceed.
3. O & M Manuals will be complete, approved by the CA and on-site for reference during FPT.
4. The Owner's Witness will attend the Functional Performance Testing
5. The CA will document the results of all testing and maintain a log of all issues found.
6. Address current A/E punch-lists before testing starts.

E. Test Methods.

1. Functional performance testing and verification may be achieved by manual testing (persons manipulate the control system or component equipment and observe performance) or by monitoring the performance and analyzing the results using the control system's trend log capabilities or by stand-alone data-loggers.
2. Sampling. Multiple identical pieces of non-life-safety component equipment may be functionally tested using a sampling strategy. Significant application differences and significant sequence of operation differences in otherwise identical component equipment invalidates their common identity. A small size or capacity difference, alone, does not constitute a difference. No sampling by contractors is allowed in installation checklist or pre-verification test execution.
 - a. Sampling rates are as follow;
 - 1) If the number of identical components is three (3) or less, all components will be tested.
 - 2) If the number of identical components is greater than three (3), a twenty-five (25) percent sample will be used except, in no case will less than three (3) units be tested.
 - b. If a trend appears during testing (i.e. the same test fails on all like components) the testing will be stopped and the contractor will investigate and correct the issue. Notify the CA when ready for testing to resume. The CA will verify correction on the original sample and randomly test another sample to verify compliance.
 - c. If at any point during testing, the failures rate exceeds 10%, the CA will stop the testing and require the Contractor to perform and document a checkout and correction of the remaining units, prior to continuing with functionally testing the remaining units.
3. Acceptance Criteria For FPT

- a. All systems and their components must pass Functional Performance Testing at a rate of 90% or higher to be acceptable.
 - b. Systems and their components with a passing rate of 90% or higher, will be deemed acceptable. The contractor will correct all deficiencies found by the testing procedures and notify the CA when repairs are complete. The failed tests will be repeated to verify proper system operation. If the system fails any testing during the second round of tests, the contractor will correct the deficiencies and the system will be retested until all tests are passed at the contractor's expense.
 - c. Systems and their components with a passing rate of less than 90% will be deemed unacceptable. The contractor will correct all deficiencies and notify the CA when repairs are complete. The system will be retested until all tests are passed at the contractor's expense.
- F. Coordination and Scheduling. The Contractor will provide sufficient notice to the Owner's representative and CA to schedule FPT. This will be communicated through the Master Construction Schedule and updates thereto.
 1. The Contractor will verify the FPT schedule with the CA not less than 14 days before FPT is to begin by delivering the pre-verification test results to the CA (using the Facility Grid app).
 2. The Owner's witness will observe and witness the FPT of all component equipment and systems.
 3. Provide ladders, scaffolding, and staging as required to permit the CA & Owner's witness to directly access and observe the performance of the component equipment being tested.
 4. The contractor will provide experienced craftsmen with tools to assist the CA during FPT.
- G. Corrections of Minor Issues identified during testing may be made during the tests at the discretion of the Architect's consultant and/or the CA. In such cases the issue and resolution will be documented on the procedure form. The issue will be scored as a failure on the test form.
- H. Problem Solving. The Commissioning team may recommend solutions to problems found, however the burden of responsibility to solve, correct and retest problems is with the Contractor and Architect.
- I. Deferred Testing
 1. If during testing, the desired results cannot be produced because of seasonal conditions, Functional Performance Testing may be deferred until the environmental conditions are satisfactory for performing the test. The Owner's Representative and the CA will determine the scheduling for deferred seasonal test.
 2. The contractor will supply labor, material and equipment as required to assist the CA with the deferred testing at no additional cost to the owner. The CA will work with the Contractor to accommodate scheduling, but no more than 14 days notice will be required to the Contractor to schedule Deferred Testing.

3.6 CLOSEOUT ACTIVITIES

- A. Documentation. The CA will document the results of all functional performance tests. The CA will include the completed test forms in the Commissioning final report.
- B. Issues:
1. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures. However, the CA will not be pressured into overlooking deficient work or loosening acceptance criteria to satisfy scheduling or cost issues, unless there is an overriding reason to do so at the request of the Owner's representative.
 2. As tests progress and deficiencies are identified, the CA will discuss the issues with the Contractor.
 - a. When there is no dispute on the deficiency and the Contractor accepts responsibility to correct it:
 - 1) The CA documents the deficiency.
 - 2) The contractor corrects the deficiency.
 - 3) The Contractor reschedules the test and the test is repeated.
 - b. If there is a dispute about a deficiency, regarding whether it is a deficiency or who is responsible:
 - 1) The deficiency will be documented on the deficiency list with the contractor's response and a copy given to the Contractor and the Architect.
 - 2) Resolutions are made at the lowest management level possible. Other parties are brought into the discussions as needed. Final interpretive authority is with the Architect/Engineer. Final acceptance authority is with the Project Manager.
 - 3) The CA documents the resolution process.
 - 4) Once the interpretation and resolution have been decided, the appropriate party corrects the deficiency and notifies the CA. The Contractor reschedules the test and the test is repeated until satisfactory performance is achieved.
 3. The Contractor will respond in writing to the Architect and CA at least as often as project meetings are being scheduled concerning the status of each outstanding issue identified during commissioning. Discussion will cover explanations of any disagreements and proposals for their resolution.
 4. The CA retains the original Issues list until the end of the project.
 5. The Contractor will not consider any required retesting by any contractor a justified reason for a claim of delay or for a time extension.
- C. Failure Due to Manufacturer Defect. If 10%, or three, whichever is greater, of identical pieces (size alone does not constitute a difference) of component equipment fail to perform to the Contract Documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the Architect or Owner's representative. In such case, the Contractor will provide the Owner with the following:
1. Within one week of notification from the Architect or Owner's representative, the Contractor or manufacturer's representative will examine all other identical units making a record of the findings. The findings will be provided to the Architect, Owner's representative within two weeks of the original notice.

2. Within two weeks of the original notification, the Contractor or manufacturer will provide a signed and dated, written explanation of the issue, cause of failures, etc. and all proposed solutions which will include full component equipment submittals. The proposed solutions will not significantly exceed the specification requirements of the original installation.
3. The Architect or Owner's representative will determine whether a replacement of all identical units or a repair is acceptable.
4. Two examples of the proposed solution will be installed by the Contractor and the Architect or Owner's representative will be allowed to test the installations for up to one week, upon which the Architect or Owner's representative will decide whether to accept the solution.
5. Upon acceptance, the Contractor and/or manufacturer will replace or repair all identical items, at their expense and extend the warranty accordingly, if the original component equipment warranty had begun. The replacement/repair work will proceed with reasonable speed beginning within one week from when parts can be obtained.

D. Approval.

The CA notes each satisfactorily demonstrated function on the test form. Formal approval of the functional test is made later after review by the Architect's consultant and the CA and by the Owner's Representative, if necessary. The CA recommends acceptance of testing to the Owner's representative in his final report.

E. Non-Conformance - Cost of Retesting.

1. The cost for the Contractor to retest a pre-functional or functional test, if they are responsible for the deficiency, shall be theirs. If they are not responsible, any cost recovery for retesting costs shall be negotiated with the Architect.
2. For a deficiency identified during Functional Performance Testing, the following shall apply:
 - a. The Commissioning Authority and/or Owner's Representative will retest the equipment, when notified by the Contractor in writing that the deficiency has been corrected. The cost for retesting will be charged to the Contractor. The amount of the charge will be deducted from the final progress payment. These charges can include lodging, meals, travel, equipment rental, and labor costs for the Commissioning Authority and/or Owners representative.
 - b. The reason that the charges are the Contractor's responsibility are as follows:
 - 1) The Contractor approved the Functional Performance tests prior to testing.
 - 2) The Contractor and subcontractors performed pre-verification tests and the Contractor has run the tests to make sure the equipment functions.
 - 3) Any Design deficiencies discovered during the Contractor pre-verification test where identified and worked out with the Architect/Engineer prior to scheduling the Functional Performance tests.
 - c. The retesting process will be repeated until satisfactory performance is achieved. Because the Contractor has verified that the equipment is ready for retesting, each retest is subject to a charge to the Contractor, if the test fails. It is important that the Contractor verify performance before asking for a retest.
 - d. Refer to the sampling section of Division 019100, Part 3.5 for requirements for testing and retesting identical equipment.

F. Owner's Instruction

1. Operation and Maintenance Manuals

- a. As part of the required submittals for the Contract, Contractor will submit a draft copy of the Operation and Maintenance Manuals within 90 days after normal submittals have been approved.
- b. Submit the draft document for review by the Owner's Representative, Architect, and Commissioning Authority to ensure completeness, proper written communications, and compliance with each reviewer's knowledge of the significant requirements. The CA will review O & M manuals for compliance with these specifications.
- c. Unacceptable Manuals will be returned to the Contractor for revision and resubmitted for review by the CA. The following information will be included in the O&M manuals:
 - 1) Tab labels will not be handwritten.
 - 2) The first page behind the component equipment tab will contain the name, address and telephone number of the manufacturer and installing contractor and the 24-hour number for emergency service for all component equipment in this section, identified by component equipment.
 - 3) There will be written manufacturer's data with the model and features of this installation clearly marked and edited to omit reference to products or data not applicable to this installation.
 - 4) Installation, startup and break-in instructions.
 - 5) All starting, normal shutdown, emergency shutdown, manual operation, seasonal changeover and normal operating procedures and data, including any special limitations.
 - 6) O&M and installation instructions that were shipped with the unit.
 - 7) Preventive maintenance and service procedures and schedules.
 - 8) Troubleshooting procedures.
 - 9) A parts list, edited to omit reference to items that do not apply to this installation.
 - 10) Lists of any special tools required to service or maintain the component equipment.
 - 11) Performance data, ratings and curves.
 - 12) Warranty, which clearly lists conditions to be maintained to keep warranty in effect and conditions that, would affect the validity of the warranty. (Final date to be added at completion)
 - 13) Any service contracts issued.
 - 14) Prepare written text and/or special drawings to provide necessary information, where manufacturer's standard printed data is not available and information is necessary for a proper understanding and operation and maintenance of component equipment or systems, or where it is necessary to provide additional information to supplement data included in the manual or project documents.
 - 15) Provide preventive maintenance information and include condensed typewritten excerpts from the manufacturer's written instructions for weekly, monthly, quarterly, annual, etc. maintenance.
 - 16) Provide condensed operating instructions, including condensed instructions for start-up, shutdown, emergency operation, safety precautions, and unusual features and troubleshooting suggestions. Where control is clearly covered in controls description, it is not to be duplicated here.
 - 17) In addition, a copy of these instructions will be clearly laminated and secured adjacent to the component equipment where it can be easily read by operating personnel. These instructions will be provided for boilers, furnaces, chillers, pumps, heat rejection component equipment, large air handling units (greater than 10 tons), heat pump systems, control system, air compressors and dryers.

G. Training

1. Prepare and submit for approval a training plan. Training plan will include for each training session:
 - a. Dates, start and finish times, and locations
 - b. Outline of the information to be presented
 - c. Names and qualifications of the presenters
 - d. List of texts and other materials required to support training.
2. Training materials are due 30 days before training is scheduled to begin. This will be provided for review and approval by the CA.
3. Obtain assistance from appropriate subcontractors and vendors to provide training for the Owner's operations staff as specified in all Divisions.
4. Training will be in a classroom setting with the appropriate schematics, handouts, and audio/visual training aids.
5. Host each training session.
6. Provide program overview and curriculum guidance.
7. Obtain signatures of attendees on a sign-in list.
8. Component equipment vendors provide training on the specifics of each system and philosophy, troubleshooting, and repair techniques as specified in the relevant sections of this specification.
9. Installation subcontractors provide training on peculiarities specific to this project and job specific experience as specified in the relevant sections of this specification.
10. Deferred training will follow the same outline as above.

H. Final Completion

1. The CA will review Contractor's records of completion of commissioning requirements. Upon receiving evidence of satisfactory completion of Final Completion requirements in Division 01, the CA will submit to the Owner a recommendation to accept Final Completion.

I. Exclusions

1. The Owner's Representative and CA are not responsible for construction means, methods, job safety, or any management function related to commissioning on the job site.
2. The Contractor will provide all technician services requiring tools or the use of tools to test, adjust, or otherwise bring component equipment into a full operational state.

3.7 DOCUMENTS REQUIRED

A. The General Contractor will provide the following documentation before Final Acceptance:

1. Copy of Completed Certificate of Occupancy with approval signatures of all Authority Having Jurisdiction.
 - a. Health Department
 - b. Fire Marshall
 - c. Building Inspector
 - d. Other State or Local AHJ

END OF SECTION

