

**MANDATORY
PREBID MEETING**

**May 3, 2019
10:00 AM**

**To be held at
Creston Park – Restroom
B: meet at the
intersection of SE Rhone
St and SE 43rd Ave
parking lot**



Bureau of Parks and Recreation

**PREQUALIFICATION
REQUIRED IN**

**Class 20, Building
Alteration Repair
for
\$500,000**

BID NUMBER 00001226

for

ELECTRONIC LOCKING PROJECT

April, 2019

Refer Questions to:

**Rachel Beane
Sr. Procurement Specialist
Phone: 503-823-9293
Rachel.Beane@portlandoregon.gov**

Submit Bid to:

**Procurement Services online procurement
website at:
<https://procure.portlandoregon.gov/bsa>**

BIDS DUE:

May 21, 2019

by 2:00 PM

PROCUREMENT SERVICES

NOTICE TO BIDDERS
BIDS ARE DUE BY 2:00 P.M.

This checklist is provided for the use and convenience of bidders. Please refer to the bid documents for requirements, as we cannot guarantee this list is complete. The responsibility for compliance with all requirements remains with the bidder. All submissions are made to Procurement Services.

PRIOR TO BID OPENING: The contractor shall have a current active license from the Oregon Construction Contractors Board. If required by the bid documents, contractors may also be required to attend a pre-bid conference. Contractors also are expected to be aware of, and base their bids upon, all addenda that might be issued prior to bid opening.

1. ☒ Prequalification by City of Portland (*Prequalification Application must be filed with Procurement Services at least 10 days prior to bid opening, unless that time period has been changed by a prequalification application or the Instructions to Bidders.*) **Download** at: <http://www.portlandoregon.gov/bfrs/44700>
2. ☒ **Current, active CCB license** is required to submit a bid as stated in Chapter 5.34.520 (A) of the Code of the City of Portland. Specialty licensing as required in the Bid Specifications (shown below)
Specialty license: ☐ None
Specialty license: ☐ None
3. ☒ Addenda (**check for receipt of all addenda and acknowledge all addenda before submitting bid**)
4. ☒ Mandatory prebid conference scheduled

Checked items must be submitted WITH the Bid.

1. ☒ Bid (*see Instructions to Bidders*)
2. ☒ Bid Security (*see Instructions to Bidders*)
3. ☒ Non-Collusion Affidavit
4. ☐ Other

Checked items must be submitted via email to Buyer BY 4:00 p.m. on the day of the bid opening.

1. ☒ State of Oregon – First Tier Subcontractor Disclosure Form required if bid is greater than \$100,000. (*see State of Oregon Subcontractor Disclosure form for requirements*)

Checked items must be submitted electronically via the City's Contract Compliance Reporting System (previously Form 1)

1. ☒ City of Portland Subcontractor Equity Program - UTILIZATION PLAN (UP) - DUE from the apparent low bidder WITHIN 24 HOURS OF NOTIFICATION BY CITY OF PORTLAND.

Low Bidders:

1. ☒ Workforce Training and Hiring Program (*see Workforce Training Specification for requirements*)
2. ☒ Certification as an EEO Affirmative Action Employer <http://procure.portlandoregon.gov/>
3. ☒ Equal Benefits Compliance

PROJECT CONTACTS NAMES, ADDRESSES, AND PHONE NUMBERS

During the bidding process, bidders should direct all questions to Rachel Beane for this project.

The following names, addresses, and phone numbers are included for the convenience of the Bidders and Contractor:

Certification as an EEO Affirmative Action Employer:

Procurement Services
1120 SW 5th Avenue, Room 750
Portland, OR 97204-1972
(503) 823-6855
(503) 865-3455 FAX
<https://procure.portlandoregon.gov/bsol/>

Prequalification of Bidders:

Procurement Services
1120 SW 5th Avenue, Room 750
Portland, OR 97204-1972
(503) 823-5047
prequalapps@portlandoregon.gov
<http://www.portlandonline.com/omf/index.cfm?c=27353&>

Submittal of Electronic Bids:

<https://procure.portlandoregon.gov>

Purchase of "Standard Construction Specifications":

Permit Application Center
BDS Building, First Floor
1900 SW 4th Avenue
Portland, OR 97204-1971
(503) 823-7660

Subcontractor Equity Program / Workforce Training & Hiring

Paula Wendorf
Procurement Services
1120 SW 5th Avenue, Room 750
Portland, OR 97204-1972
(503) 823-6889
(503) 865-3455 FAX
paula.wendorf@portlandoregon.gov

INSTRUCTIONS TO BIDDERS

1.0 SECURING DOCUMENTS

Bid documents are available electronically at: <http://procure.portlandoregon.gov/>.

All Bidders who submit bids on this project are required to have copies of a complete set of Bid Documents (plans and specifications), and all addenda issued prior to the bid due date. If there is any question as to the Bid Documents or addenda, contact Procurement Services.

If you intend to submit a bid on this project, you must be registered as a Seller at: <http://procure.portlandoregon.gov/>

1.1 INCORPORATION OF GENERAL CONDITIONS 'B'

Bidder shall incorporate all applicable provisions of the General Conditions of the Contract for Construction, Division "B" January 2002 Edition, as revised January 2006, into their bid. General Conditions of the Contract can be downloaded at: <http://www.portlandoregon.gov/shared/cfm/image.cfm?id=10388>.

All work done and materials used on this project and the legal relations between the parties and the Contractor's requirements shall be as set forth in said General Conditions, except as specially and specifically modified or deleted by the Supplemental Conditions. If there is any difference, discrepancy or conflict between these Supplemental Conditions and the General Conditions of the City of Portland, the Supplemental Conditions as set forth here shall apply.

2.0 SUBMITTING BIDS

2.1 BID FORM

2.1.1 The bid and all other required documents as specified in the Notice to Bidders must be submitted electronically through BuySpeed on or before the bid due date and time. Instructions for Submitting a Construction ITB in BuySpeed are available at the following link: <https://www.portlandoregon.gov/brrfs/article/652569>. All required bid documents shall be submitted as an attachment in BuySpeed as a single pdf document using a naming convention which includes Bid Number, Project Title and Contractors name in that order with the use of abbreviations being acceptable (i.e. 00000715SlabtownSewerXYZConstCo.pdf). The total base bid amount (excluding any/all alternates) shall also be submitted as an Item amount in BuySpeed as described in the Instructions for Submitting a Construction ITB in BuySpeed. Failure to include the required bid docs as an attachment shall deem the bid non-responsive. **NOTE: Bidders should allow for a sufficient amount of time for the bid entry/document upload process in BuySpeed in order to ensure timely submission.**

Bidders wishing to listen to the public opening via a conference call may use the Dial-In number and Conference Code provided below:

**Local US Dial-in: 1 971-256-0996
Conference Code: 949530**

Callers that dial in before the host will be placed on hold until the host dials in.

- 2.1.2 All bids must be submitted using the forms included in the Invitation for Bid and all applicable blanks giving general information must be filled in and signed by the Bidder or a duly authorized agent. All bids must be clearly and distinctly typed or written in black or blue ink. Any statement accompanying and tending to qualify a bid may cause rejection of such bid unless a statement is required in a bid embracing alternatives.
- 2.1.3 Bidders shall bid on all items included in the bid. Bids that are incomplete or fail to include all items contained in the plans and specifications may be rejected.
- 2.1.4 Bidders should reference the Notice to Bidders for a list of forms to be submitted with the Bid with special attention required regarding 2.5 Bid Security.

2.2 WITHDRAWAL, MODIFICATION OF BID

Submittals in writing to revise electronic Bids will not be permitted. However, the Bidder may withdraw and re-open as described in the Instructions for Submitting a Construction ITB in BuySpeed as many times as necessary up until the Bid Open date/time. All electronic Bid submittals must meet all requirements and deadlines for submitting electronic Bids.

2.3 LATE BIDS

Bids received after the scheduled bid due date and time will not be accepted.

2.4 COST OF BIDS

This Invitation for Bid does not commit the City to pay any costs incurred by any Bidder in the submission of their bid, or in making any necessary studies or designs for the preparation thereof.

2.5 BID SECURITY

No bid will be considered unless accompanied by a certified check, cashier's check, or a bid bond for an amount not less than ten percent (10%) of the aggregate amount of the bid. It shall be payable to the City of Portland as a guarantee that the bid shall be irrevocable for a period of sixty (60) calendar days, unless otherwise specified, after the bid opening date and time and as liquidated damages should the Bidder fail or neglect to furnish the required performance bond and insurance and execute a contract within ten (10) calendar days after receiving said contract from the Chief Procurement Officer for execution. The bid security shall be retained for a period-of-time in accordance with City of Portland Code 5.33.410.

For Bids submitted electronically, the bid security should be submitted as part of the aforementioned single pdf submission and shall be in color. The City reserves the right to request the original bid security after bid opening if the electronic format is not acceptable to the City Attorney's Office.

2.6 CONFLICT OF INTEREST

A Bidder submitting a bid hereby certifies that no officer, agent or employee of the City who has a pecuniary interest in this bid has participated in the contract negotiations on the part of the City, that the bid is made in good faith without fraud, collusion, or connection of any kind with any other Bidder of the same Invitation for Bids, and that the Bidder is competing solely in its own behalf without connection with, or obligation to, any undisclosed person or firm. No bid will be considered unless accompanied by the notarized Non-Collusion Affidavit form included in the Invitation for Bid.

The City reserves the right to request the original notarized Non-Collusion Affidavit after bid opening if the electronic format is not acceptable.

3.0 LEGAL REQUIREMENTS

3.1 LAWS, ORDINANCES, AND REGULATIONS

The Bidder is presumed to be familiar with all Federal, State and local laws, ordinances, and regulations, which in any manner affect the personnel, material or equipment used in the proposed Work. Bidders agree that if awarded a contract, the successful Bidder will comply with all applicable federal, state and local laws, ordinances, and regulations. The successful bidder shall comply with Title VI of the Civil Rights Act of 1964 and its corresponding regulations as further described at: <http://www.portlandoregon.gov/brrfs/?c=27353&a=446806>. Additionally, the successful bidder must maintain anti-harassment policy in compliance with The City's [HR 2.02 Prohibition Against Workplace Harassment Discrimination and Retaliation policy](#) which can be found at: <https://www.portlandoregon.gov/citycode/article/12121>.

3.2 SPECIFIC STATUTES AND ORDINANCES

The Bidder's attention is called to the requirements of Oregon Revised Statutes Chapter 279A, 279B, 279C, and to Title 17 and Chapter 5.34 of the City of Portland Code with reference to public improvement contracts, purchasing in general, and to contractor's procedures and pre-qualification requirements.

3.3 EQUAL EMPLOYMENT OPPORTUNITY (EEO) CERTIFICATION

All Bidders must be certified as Equal Employment Opportunity Employers as prescribed by Chapter 5.33.076 of the Code of the City of Portland. Failure to receive EEO compliance prior to the date and time of bid opening may result in delaying the award of the contract. Details of certification requirements are available from Procurement Services, 1120 SW Fifth Avenue, Room 750, Portland, Oregon 97204, (503) 823-5047, or on Procurement Services' website under the Contractor Resources page. In order to be EEO certified, Bidders must complete the online form at: <http://procure.portlandoregon.gov/>.

3.4 NON-DISCRIMINATION IN EMPLOYEE BENEFITS (EQUAL BENEFITS)

The successful Bidder must be in compliance with the City's Equal Benefits Program as prescribed by Chapter 5.33.077 of the Code of the City of Portland prior to contract award. Details of compliance requirements are available from Procurement Services, 1120 SW Fifth Avenue, Room 750, Portland, Oregon 97204, (503) 823-5047, or on Procurement Services' website under the Contractor Resources page. In order to comply, Bidders must complete the online form at: <http://procure.portlandoregon.gov/>.

3.5 PRE-QUALIFICATION OF BIDDERS

All public improvement projects with an engineer's estimate of \$250,000 or greater require pre-qualification.

Bidders shall be prequalified in Class 20 – Building Alteration Repair, in the amount of \$500,000

The City has taken the prequalification process to an online platform. Submissions can be made at the following website: <https://portlandoregon.diversitycompliance.com/?TN=portlandoregon>. Completed prequalification applications, including all required documentation, must be received by Procurement Services at least ten (10) days prior to the date of bid opening, unless specifically stated otherwise in the advertisement. Pre-qualification applications received less than ten (10) days prior to the bid opening may be processed or rejected at the City's sole discretion. If the application is not approved the City will notify the bidder in a timely matter per City Code 5.34.510 (G).

3.6 DRUG TESTING PROGRAM

Pursuant to ORS 279.505 (2) (1), the Contractor awarded the contract shall demonstrate that an employee drug-testing program is in place.

3.7 AMERICANS WITH DISABILITIES ACT

Bidders agree that if awarded a contract, the successful Bidder will comply with all applicable provisions of the Americans with Disabilities Act of 1990, 42 USC Section 12101 et seq. If any Bidder requires special assistance or auxiliary aids during the bidding process, please notify Procurement Services, (503) 823-6855, or TDD (503) 823-6868, at least two (2) business days prior to the required assistance.

3.8 BUSINESS TAX COMPLIANCE

A current business tax registration is required before doing business with the City (reference City Code Chapter 7.02). Persons whose gross receipts from all business, both within and without the City, amounts to less than \$50,000 may be exempt, information related to complying with the business tax registration is available at: <http://www.portlandoregon.gov/revenue/29320?>

3.9 CONSTRUCTION AND LANDSCAPE CONTRACTORS BOARDS

Construction contractors must be licensed with the State of Oregon Construction Contractors Board in accordance with ORS 701.005 and any other specialty licensing as required in the bid specification prior to submitting a bid to the City. For information contact:

CONSTRUCTION CONTRACTORS BOARD
700 Summer St. NE, Suite #300
Salem, OR 97310
(503) 378-4621
(website) <http://www.ccb.state.or.us>

A Landscape Contractors Board license is required in accordance with ORS 671.510 if the bid specification includes landscape work as defined by ORS 671.510. For information contact:

LANDSCAPE CONTRACTORS BOARD
2111 Front St. NE, Suite #2-101
Salem, OR 97301
(503) 378-5909
<http://www.oregon.gov/LCB/>

4.0 PRE-BID REQUIREMENTS

4.1 EXAMINATION OF BID DOCUMENTS & WORKSITE

Before submitting a bid, each Bidder shall carefully examine the Drawings, read the Specifications and all Addenda and visit the site of the Work. Each Bidder shall fully inform themselves prior to submitting a bid as to all existing conditions and limitations under which the Work is to be performed, and shall include in the bid a sum to cover all costs of all items necessary to perform the Work as set forth in the Bid Documents. No allowance will be made to any Bidder because of lack of such examination or knowledge. Submission of a bid will be construed as conclusive evidence that the Bidder has made such examination.

4.2 CLARIFICATION OF BID DOCUMENTS PRIOR TO BID - ADDENDA

4.2.1 Requests for additional information or interpretation of the bid document shall be submitted to the Chief Procurement Officer no later than seven (7) days before the deadline for submission of bids. Bid due date is indicated on the cover of the Bid Document.

4.2.2 If, in the opinion of the City, additional information or clarification is required, an addendum will be issued to all plan holders on record in Procurement Services. Any addenda issued by the Chief Procurement Officer seventy-two (72) hours or more before the scheduled closing time for filing bids shall be binding upon the Bidder. Failure of the Bidder to receive or obtain such addenda shall not excuse them from compliance therewith if they are awarded the contract.

4.2.3 Oral instructions or information given by City Officers, employees or agents to Bidders concerning this Bid Document or the work in general shall not bind the City.

4.3 PRE-BID CONFERENCE

A pre-bid conference may be scheduled to answer Bidders' questions. See front cover of Bid Document for date, time and place. If a mandatory pre-bid conference is scheduled, only General Contractors are required to attend, it is optional for sub-contractors.

If an insufficient number of General Contractors or their representatives attend the Mandatory Pre-Bid conference scheduled for this project, the City may decide to hold a 2nd Mandatory Pre-Bid conference to solicit additional interest and provide a more competitive bidding process.

4.4 SUBSTITUTIONS

No substitution will be considered prior to the Bid due date unless written request for approval has been received by the Owner's Representative at least Ten (10) business

days prior to the bid due date. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work including changes in the work of other contracts that incorporation of the proposed substitution would require shall be included. The burden of proof of the merit of the proposed substitution is upon the Bidder.

The City's decision of approval or disapproval of a proposed substitution shall be final. Requests for substitution should be submitted in duplicate to the Owner's Representative on the Substitution Request Form, with one additional copy sent to Procurement Services. The Owner's Representative shall make a decision on the substitution request within Five (5) business days prior to the bid due date. All approved substitution requests shall be included in an Addendum as specified in paragraph 4.2. Substitution requests that have been rejected, or submitted too late, shall not be included in an Addendum. The Owner's Representative shall notify the firm requesting the substitution with the reason for rejection.

5.0 CONTRACT AWARD

5.1 BASIS OF AWARD

- 5.1.1 The contract, if awarded, will be made to the lowest, responsive and responsible Bidder offering the lowest lump sum base bid.
- 5.1.2 Determination of the lowest responsive, responsible bid is subject to review by the City Attorney.
- 5.1.3 The City reserves the right to accept or reject any or all bids in whole or in part, and waives irregularities not affecting substantial rights; and may reject for good cause all bids upon the City's finding that it is in the public interest to do so.
- 5.1.4 Award of contract, if awarded, will be made within sixty (60) calendar days after the date of bid opening unless otherwise stated in the Bid Documents.

5.2 EXECUTION OF CONTRACT DOCUMENTS

- 5.2.1 The Contract Form to be executed by the City and the successful Bidder for the Work is a standard form of the City of Portland, Oregon. Such form, incorporated into these Bid Documents by reference only and not physically contained herein, may be reviewed by prospective Bidders at Procurement Services, phone (503) 823-5047 or by contacting the Buyer for this project, Rachel Beane at 503-823-9293.
- 5.2.2 If the contract total is \$50,000 or less, a purchase order may be used to confirm the City's acceptance of a bid.
- 5.2.3 The Bidder to whom the Contract is awarded shall, within ten (10) calendar days after receipt of Contract forms from the Chief Procurement Officer, sign and deliver to the Chief Procurement Officer all required copies.
- 5.2.4 At or prior to delivery of the signed Contract, the Contractor shall deliver to the Chief Procurement Officer a Performance Bond, a separate Payment Bond, any

other bonds and policies of insurance or insurance certificates with additional insured endorsement form(s) attached as required by the Contract Documents.

- 5.2.5 Failure or refusal to furnish the signed Contract, bonds and/or insurance policies or certificates in a form satisfactory to the City within the time stated above shall be just cause for cancellation of the award, withdrawal of the Contract, and forfeiture of the Bid Guaranty.

5.3 ELECTRONIC PAYMENTS

It is the City's policy to pay its vendor invoices via electronic funds transfers through the automated clearing house (ACH) network. To initiate payment of invoices, vendors shall execute the City's standard ACH Vendor Payment Authorization Agreement which is available on the City's website at: <http://www.portlandoregon.gov/bfrs/article/409834>. Upon verification of the data provided, the Payment Authorization Agreement will authorize the City to deposit payment for services rendered directly into vendor accounts with financial institutions. All payments shall be in United States currency.

6.0 PERFORMANCE AND PAYMENT BONDS

- 6.1 The forms for the Performance Bond and the Payment Bond, to be executed by the successful Bidder for the Work and delivered to the City not later than the date of execution of the Contract, are the standard forms of the City of Portland, Oregon. Such forms, incorporated into these Bid Documents by reference only and not physically contained herein, may be reviewed by prospective Bidders at Procurement Services, City of Portland, 1120 SW 5th Avenue, Room 750, Portland, Oregon, 97204, phone (503) 823-5047.
- 6.2 The Bonds, in an amount equal to one hundred percent (100%) of the Contract Sum, shall be satisfactory to the City and shall be executed by a corporate surety licensed to do business in the State of Oregon. The attorney in fact who executed the Bonds on behalf of the surety shall affix thereto a certified and current copy of his power of attorney and shall indicate the monetary limit of such power.

7.0 PREFERENCES FOR GOOD & SERVICES AND NON-RESIDENT CONTRACTOR

- 7.1 ORS 279A.120 requires that, in all public contracts, the public contracting agency shall prefer goods or services that have been manufactured or produced in this State if price, fitness, availability and quality are otherwise equal. In determining the lowest responsive bidder, the City shall add a percent increase on the bid of a nonresident bidder equal to the percent, if any, of the preference given to that bidder in the state in which the bidder resides.
- 7.2 Where a public contract is awarded to a nonresident contractor and the contract price exceeds \$10,000, the Contractor shall promptly report to the Oregon Department of Revenue on forms provided by the Department of Revenue, the total contract price, terms of payment, length of contract and such other information as the Department of Revenue may require before final payment on the contract can be made. For purposes of this subsection, a nonresident contractor is one who is not domiciled in or registered to do business in the State of Oregon. The Oregon Department of Revenue Nonresident Bidder Form is available at https://www.oregon.gov/DOR/forms/FormsPubs/nonresident-bidder_800-020.pdf.

8.0 LOCAL BUSINESS PREFERENCE

Residents of the State of Oregon and SW Washington benefit from optimizing local businesses and services, and the local employment opportunities they generate. As such the City desires to employ local businesses in the purchase, lease, or sale of any personal property, public improvements or services. Therefore, the City shall prefer goods or services that have been manufactured or produced by a local business if price, fitness, availability and quality are otherwise equal.

9.0 WAGE RATES

- 9.1 State of Oregon, Bureau of Labor and Industries (BOLI) prevailing wage rates are required to be paid to workers in each trade or occupation that the Contractor or Subcontractor uses in performing all or part of the work on this project. The applicable prevailing wage rates for this project will be the rates in the BOLI publication titled "Prevailing Wage Rates for Public Works Contracts in Oregon" effective on January 1, 2019, including the applicable amendments dated April 1, 2019, which are hereby incorporated into this contract by this reference. Workers must be paid not less than the specified minimum hourly rate of wage in accordance with ORS 279C.838 and 279C.840. You can download your copy from www.oregon.gov/boli. If you need additional copies, contact Bureau of Labor & Industries, 800 NE Oregon St. #32, Portland, OR 97232; phone 971-673-0839.
- 9.2 The City of Portland is required to pay the Prevailing Wage Rate (PWR) fee directly to the Oregon Bureau of Labor and Industries. Therefore, Contractor acknowledges that this fee has not been included in the bid amount for this project.
- 9.3 The Contractor awarded the contract is required to post a Public Works Bond with the Oregon Contractors Construction Board (OCCB) unless exempt prior to start of work on the project.
- 9.4 Subcontractors awarded the contract are required to post a Public Works Bond with the Oregon Contractors Construction Board (OCCB) unless exempt prior to start of work on the project.

10.0 OWNERS RESPONSIBILITIES UNDER THE CONTRACT

The City will assign a project manager who will be the contractor's sole source of contact for decision processing for the project. The project manager will arrange for and coordinate other City resources necessary to construct the project with the exception of planning, permitting, and other regulatory agencies of the City. The project manager will be responsible for assuring that requests for clarifications and change proposals are processed in a timely manner. The project manager will provide the contractor with such drawings and specifications as needed to complete work.

11.0 REPORTING REQUIREMENTS

Contractor shall cooperate with the City with respect to its reporting requirements for financial and programmatic data resulting from the expenditure of City funds, as follows:

- 11.1 Contractor shall provide an estimate of the number and types of jobs created or retained by the project at the beginning of the project. If Contractor uses vendors in the project, include direct jobs created or retained by the vendors.
- 11.2 Contractor shall report actual performance results consisting of the number and types of jobs created and/or retained at final completion of the project.
- 11.3 Contractor must include these requirements in any subcontracts awarded for the project.
- 11.4 Reports shall be submitted upon request. The Contractor's timely, complete, accurate, and truthful compliance with the reporting obligations constitutes a material element of the Contractor's performance of this contract. Failure to submit these reports shall be deemed noncompliance, and the City may withhold any amounts otherwise due to the Contractor under this contract until the Contractor has submitted the reports.

12.0 PROTEST OF CONTRACTOR SELECTION

Bidders are permitted to challenge the City's decision to award a contract. Portland City Code 5.34.700 thru 5.34.740 describes in detail the protest and appeal procedures when a bid process is officially protested.

For each formal bid project not exempted from the competitive bidding procedures of ORS 279C.410 Procurement Services shall post a Notice of Intent to Award upon determination of the lowest responsive and responsible bidder. The Notice of Intent to Award shall be posted both on the Bureau's Internet Web Page, and in Procurement Services office location at 1120 SW Fifth Avenue, Room 750, Portland, OR, 97204. If the proposed contract exceeds \$500,000, the Notice of Intent to Award shall also be mailed to each Bidder.

A Bidder who is adversely affected or aggrieved by the award of contract shall have seven (7) calendar days from the issuance of the Notice of Intent to Award to file a bid protest. The protest must be filed in writing to the Chief Procurement Officer and must specify the grounds upon which the protest is based. To be valid, a protest must come from an actual Bidder for the contract who claims to be the rightful awardee. A protest is not valid if filed by a Bidder who cannot show that it would be awarded the contract if its protest were accepted.

The Chief Procurement Officer will review the protest and issue a written decision. If the Bidder disagrees with the decision of the Chief Procurement Officer, the Chief Procurement Officer may refer to the Contract Board of Appeals or City Council as he/she determines. The request for appeal must be filed with the Chief Procurement Officer within seven (7) calendar days from the date of the written decision. The request must describe the specific reason for the appeal request, and is limited to those matters that were raised in the original protest letter.

BID FORM

To: City of Portland, Oregon
c/o Chief Procurement Officer, Procurement Services
1120 S.W. Fifth Avenue, Room 750
Portland, OR 97204

For: Electronic Locking Project, Bid Number 00001226

The undersigned, having fully examined the conditions, Specifications, Addenda and property to be improved, hereby offers and agrees that this bid shall be irrevocable for at least Sixty (60) Calendar Days after the bid opening date and time. If accepted, the undersigned shall furnish all materials, labor and equipment and complete the work within the contract time stipulated in the Contract Documents, in compliance with the terms and conditions of the Contract Documents.

LUMP SUM BASE BID:

Item No.	Description of Item	Lump Sum Amount
1	Contingency Allowance	\$ 20,000.00
2	General Conditions	\$
Subtotal Allowances & GC's		\$
Essex		
3	Selective Demolition	\$
4	Doors, Frames and Hardware	\$
5	Electrical	\$
6	Finishes	
Subtotal Essex		\$
Knott		
7	Selective Demolition	\$
8	Doors, Frames and Hardware	\$
9	Electrical	\$
10	Finishes	\$
Subtotal Knott		\$
Cathedral		
11	Selective Demolition	\$
12	Doors, Frames and Hardware	\$
13	Electrical	\$
14	Finishes	\$
Subtotal Cathedral		\$
Northgate		

15	Selective Demolition	\$
16	Doors, Frames and Hardware	\$
17	Electrical	\$
18	Finishes	\$
Subtotal Northgate		\$
Pier		
19	Selective Demolition	\$
20	Doors, Frames and Hardware	\$
21	Electrical	\$
22	Finishes	\$
Subtotal Pier		\$
Creston		
23	Selective Demolition	\$
24	Doors, Frames and Hardware	\$
25	Electrical	\$
26	Finishes	\$
Subtotal Creston		\$
Woodstock		
27	Selective Demolition	\$
28	Doors, Frames and Hardware	\$
29	Electrical	\$
30	Finishes	\$
Subtotal Woodstock		\$
Gabriel		
31	Selective Demolition	\$
32	Doors, Frames and Hardware	\$
33	Electrical	\$
34	Finishes	\$
Subtotal Gabriel		\$
Willamette		
35	Selective Demolition	\$
36	Doors, Frames and Hardware	\$
37	Electrical	\$
38	Finishes	\$
Subtotal Willamette		\$
TOTAL LUMP SUM BASE BID (items 1-38)		

UNIT PRICES

Item No.	Description of Item	Qty	Unit	Unit Price	Extension
1	Temp Tree Protection Fencing	1,000	LF	\$	\$
TOTAL BASE BID					\$

ADD ALTERNATES

Indicate with a plus (+) or minus (-) sign whether the changes are an addition to (+) or deduction from (-) the Lump Sum Base Bid amount. Refer to Section 01 2300 – Alternates of the specifications for detailed information.

Item No.	Description of Item	Lump Sum Amount
Bid Alternate No. 1 - Berkeley Park		
a.	Selective Demolition	\$
b.	Doors, Frames and Hardware	\$
c.	Electrical	\$
d.	Finishes	\$
Total BA1 - Berkeley		\$
Bid Alternate No. 2 - Kenton Park		
a.	Selective Demolition	\$
b.	Doors, Frames and Hardware	\$
c.	Electrical	\$
d.	Finishes	\$
Total BA2 - Kenton		\$
Bid Alternate No. 3 – Arbor Lodge Park		
a.	Selective Demolition	\$
b.	Doors, Frames and Hardware	\$
c.	Electrical	\$
d.	Finishes	\$
Total BA3 – Arbor Lodge		\$
Bid Alternate No. 4 - Irving Park		
a.	Selective Demolition	\$
b.	Doors, Frames and Hardware	\$
c.	Electrical	\$
d.	Finishes	\$
Total BA4 - Irving		\$
Bid Alternate No. 5 - Grant Park		
a.	Selective Demolition	\$

b.	Doors, Frames and Hardware	\$
c.	Electrical	\$
d.	Finishes	\$
Total BA5 – Grant		\$

ADDENDA

The undersigned acknowledges receipt of all addenda issued to this solicitation.

PREVAILING WAGES

Bidder acknowledges the requirements of this solicitation in regards to the State of Oregon Prevailing Wage requirements or the federal prevailing wage requirements or both as required by ORS 279C.838 or 279C.840 or 40 USC § 276A will be complied with. (HB 2041, § 25)

Effective January 1, 2008, the City of Portland is required to pay the Prevailing Wage Rate (PWR) fee of 1/10 of 1% of the total contract price directly to the Oregon Bureau of Labor and Industries (Ref. HB 2021). **Therefore, by signing this form Contractor acknowledges that this fee has not been included in the bid amount for this project.**

RESIDENT BIDDER

All bidders must state whether they are an Oregon resident bidder or a non-resident bidder. As defined in ORS 279A.120, a resident bidder is one who has paid unemployment taxes or income taxes in the state during the 12 calendar months immediately preceding bid submission, has a business address in Oregon, and has stated in their bid to be a resident bidder.

Check one: Bidder is (___) a resident bidder or is (___) a non-resident bidder.

If a nonresident bidder, the bidder certifies residency of (insert name of state where the bidder is a resident):

ASSIGNMENT OF ANTI-TRUST RIGHTS

The undersigned acknowledges if they enter into a contract they will be assigning to the Owner any Claim for relief that the Contractor has or may have in the future by reason of violation of 15 USC SS 1-15 or ORS 646.725 or ORS 646.730.

Date: _____

Name of Firm: _____

Street Address: _____

City of: _____ State _____ Zip _____

Name: _____
(Original Signature) (Title)

Name: (Print) _____

Phone _____ Fax _____

Email _____

EEO ☐ EBO ☐ (see instructions to bidders 3.3 and 3.4)

Employer Identification Number _____

SIC or Type of Business _____

Construction Contractors Board Registration Number _____

City of Portland Business Tax Registration Number _____

Firm is a Corporation _____ Partnership _____ Proprietorship _____

If Incorporated, Registered in the State of: _____

If a Partnership, list partners: _____

If a Proprietorship, name of principal: _____

B I D B O N D

KNOW ALL PEOPLE BY THESE PRESENTS that we, _____, as principal, and _____, a corporation organized and existing under the laws of the State of _____ and duly authorized to transact a surety business in the State of Oregon, as surety, are held and firmly bound unto the CITY OF PORTLAND, a municipal corporation of the State of Oregon, in the penal sum of _____ Dollars (\$_____) lawful money of the United States of America, for the payment whereof well and duly to be made, we and each of us, jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that whereas the Principal has submitted, or is about to submit, a proposal irrevocable for the period specified in the proposal to the Obligee on a contract for _____.

NOW, THEREFORE, in the event the principal seeks to revoke his offer for any reason not authorized by law and not consented to by Obligee within the irrevocable period and if awarded the contract and the said Principal fails, neglects or refuses to enter into a contract to perform said work and furnish said labor, equipment and/or material, and to furnish performance and labor material bonds as required within the time specified, then the amount herein stated shall be declared to be forfeited and become due and payable to the City of Portland.

SIGNED, SEALED, AND DATED THIS _____ day of _____, 20_____

Principal

Address

BY _____
Signature

Print Name and Title

Surety

BY _____
Attorney in Fact

CORPORATE SEAL (SURETY)

NOTE

If Principal is operating under an assumed business name, there must also be set forth in the first paragraph of the bond, the names of all partners or the individual owning the business, and the bond must be executed by one of them.

If the Principal is a corporation, the bond must be executed by one of the officers authorized to execute bonds, showing his/her official title and the seal of the corporation.

The bond must be executed by an attorney-in-fact for the surety company, a current copy of the Power of Attorney must be attached which lists the attorney-in-fact signing the Bid Bond.

NON-COLLUSION AFFIDAVIT

STATE OF _____ Contract Bid No. _____

COUNTY OF _____

I, (Type/Print Name) _____, state that I am (Position Title) _____ of (Name of Firm) _____ and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

1. The price(s) and the amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder, or potential bidder, except as disclosed on the attached appendix.
2. Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and the price(s), not approximate amount, will not be disclosed before bid opening.
3. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.
4. The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.
5. (Name of Firm) _____, its affiliates, subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as described in the attached appendix.

I state that (Name of Firm) _____ understands and acknowledges that the above representations are material and important, and will be relied on by **THE CITY OF PORTLAND, OREGON** in awarding the contract(s) for which this bid is submitted. My firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from **THE CITY OF PORTLAND, OREGON** of the true facts relating to the submission of bids for this contract.

(Signature)

Subscribed and sworn to before me this _____ day of _____, 20____

NOTARY PUBLIC

My commission expires _____

ASSIGNMENT OF ANTI TRUST RIGHTS

By entering into a contract, the Contractor, for consideration paid to the Contractor under the contract, does irrevocably assign to the City of Portland any claim for relief or cause of action which the Contractor now has or which may accrue to the Contractor in the future, including, at the City's option, the right to control any such litigation on such claim for relief or cause of action, by reason of violation of 15 USC SS 1-15 or ORS 646.725 or ORS 646.730, in connection with any goods or services provided to the contractor by any person, which goods or services are used, in whole or in part, for the purpose of carrying out the Contractor's obligation under this contract.

In the event the Contractor hires subcontractors to perform any of the Contractor's duties under the contract, the Contractor shall require the subcontractor to irrevocably assign to the City of Portland, as a third party beneficiary any right, title or interest that has accrued or may accrue to the subcontractor by reasons of any violation of 15 USC SS 1-15, ORS 646.725 or ORS 646.730, including, at the City's option, the rights to control of any litigation arising there under, in connection with any goods or services provided to the subcontractor by any person, in whole or in part, for the purpose of carrying out the subcontractor's obligations as agreed to by the Contractor in pursuance of the completion of the contract.

In connection with this assignment, it is an express obligation of the Contractor that it will take no action which will in any way diminish the value of the rights conveyed or assigned hereunder to the City of Portland. It is an express obligation of the Contractor to advise the City Auditor or the Office of the City Attorney of Portland, Oregon:

1. In advance, of its intention to commence any action on its own behalf regarding such claims for relief or causes of action;
2. Immediately, upon becoming aware of the fact that an action has been commenced on its own behalf by some other person or persons, of the dependency of such action; and
3. The date on which it notified the obligor(s) of any such claims for relief or causes of action of the fact of its assignment to the City of Portland.

Furthermore, it is understood or agreed that in the event that any payment under such claim is made to the Contractor, it shall promptly pay over to the City of Portland its proportionate share thereof, if any, assigned to the state hereunder.

STATE OF OREGON FIRST-TIER SUBCONTRACTOR DISCLOSURE REQUIREMENTS

(Applies to public improvement projects with an estimated value of more than \$100,000)

STATE OF OREGON FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM TO BE SUBMITTED BY ALL BIDDERS NOT LATER THAN 4:00 P.M. THE DAY THE BID IS DUE

In 2003, the Oregon Legislature revised ORS 279C.370, which provides, in part:

“(1)(a) Within two working hours after the date and time of the deadline when bids are due to a contracting agency for a public improvement contract, a bidder shall submit to the contracting agency a disclosure of the first-tier subcontractors that:

- (A) Will be furnishing labor or will be furnishing labor and materials in connection with the public improvement contract; and
- (B) Will have a contract value that is equal to or greater than five percent of the total project bid or \$15,000, whichever is greater, or \$350,000 regardless of the percentage of the total project bid.”

The Bidder must disclose the following information about their first-tier subcontracts either in its Bid submission or within two (2) working hours after the date and time of the deadline when bids are due:

- 1) the subcontractor’s name,
- 2) the dollar value of the subcontract, and
- 3) the category of work that the subcontractor will be performing.

If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate **“NONE”** on the accompanying form.

Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.

It is the Bidder’s responsibility to determine all the documents that must be submitted to the City. For purposes of this document, "submitted" means "in the physical possession of Procurement Services."

Note to Contractors who are not the low bidder:

If the apparent low bidder is disqualified or otherwise not awarded the contract and the next low bidder failed to submit the first-tier disclosure form within two (2) hours after the date and time of the deadline when bids were due, that bidder will be ineligible to receive award of the contract.



FIRST-TIER SUBCONTRACTOR DISCLOSURE

PROJECT NAME: ELECTRONIC LOCKING PROJECT

BID #: 00001226

BID CLOSING: _____ Date: _____ Time: _____

This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours after the advertised bid closing time.

List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

NAME	DOLLAR VALUE	CATEGORY OF WORK
(1)	\$	
(2)	\$	
(3)	\$	
(4)	\$	
(5)	\$	
(6)	\$	
(7)	\$	
(8)	\$	
(9)	\$	

Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.

Form submitted by (bidder name): _____

Contact name: _____ Phone no.: () _____

ORS 279C.370 First-tier subcontractor disclosure. (1)(a) Within two working hours after the date and time of the deadline when bids are due to a contracting agency for a public improvement contract, a bidder shall submit to the contracting agency a disclosure of the first-tier subcontractors that:

- (A) Will be furnishing labor or will be furnishing labor and materials in connection with the public improvement contract; and
- (B) Will have a contract value that is equal to or greater than five percent of the total project bid or \$15,000, whichever is greater, or \$350,000 regardless of the percentage of the total project bid.
- (b) For each contract to which this subsection applies, the contracting agency shall designate a deadline for submission of bids that has a date on a Tuesday, Wednesday or Thursday and a time between 2 p.m. and 5 p.m., except that this paragraph does not apply to public contracts for maintenance or construction of highways, bridges or other transportation facilities.
- (c) This subsection applies only to public improvement contracts ("**projects**") with a value, estimated by the contracting agency, of more than **\$100,000**.
- (d) This subsection does not apply to public improvement contracts that have been exempted from competitive bidding requirements under ORS 279C.335 (2).
- (2) The disclosure of first-tier subcontractors under subsection (1) of this section must include the name of each subcontractor, the category of work that each subcontractor will perform and the dollar value of each subcontract. The information shall be disclosed in substantially the following [above] form:
- (3) A contracting agency shall accept the subcontractor disclosure. The contracting agency shall consider the bid of any contractor that does not submit a subcontractor disclosure to the contracting agency to be a non-responsive bid and may not award the contract to the contractor. A contracting agency is not required to determine the accuracy or the completeness of the subcontractor disclosure.
- (4) After the bids are opened, the subcontractor disclosures must be made available for public inspection.
- (5) A contractor may substitute a first-tier subcontractor under the provisions of ORS 279C.585.
- (6) A subcontractor may file a complaint under ORS 279C.590 based on the disclosure requirements of subsection (1) of this section.

CITY OF PORTLAND

SUBCONTRACTOR EQUITY PROGRAM

I. PROGRAM DESCRIPTION

The Portland Plan as adopted by Resolution 36918 was developed to make Portland a prosperous, educated, healthy and equitable city, recognizing that advancing equity must be at the core of our plans for the future. The Portland Plan includes a frame work for equity to guide plan implementation and improve City operational and business practices, support actions that promote accountability, close disparity gaps and increase community engagement. It is the intent of the City Council to achieve equity in City government policies, procedures and practices. Equity in contracting and workforce opportunities in the City are essential to achieving the vision of the Portland Plan.

As such, the City has a compelling governmental interest to ensure that its projects and resources provide employment opportunities for firms certified by the Certification Office for Business Inclusion and Diversity (COBID) as: Disadvantaged (D), Minority (M), Women (W), Emerging Small Business (ESB), or Service Disabled Veteran-Owned Business Enterprises (SDVBE) (collectively, “COBID firms”) in order to address historic underutilization. Therefore, the City’s Subcontractor Equity Program (the “Subcontractor Equity Program”, “SEP”, or “Program”) applies to all City-Owned Projects and all City-Sponsored Projects as described below. On projects subject to the Program, the entity responsible for subcontractor selection (the “Contractor”) shall be obligated to comply with the Program for all subcontracting opportunities (regardless of value).

This project is subject to compliance reporting requirements. The prime contractor and all subcontractors are required to provide all contract compliance-related data electronically in the Contract Compliance Reporting System (CCRS). The prime contractor and all subcontractors are responsible for responding to any instructions or requests for information, and should regularly check the CCRS to manage contact information and contract records. The prime contractor is responsible for ensuring all subcontractors have completed all requested items and that their contact information is accurate and up-to-date. The City may require additional information related to the contract to be provided electronically through the system at any time before, during, or after contract award.

Information related to contractor access of the system will be provided to a designated point of contact upon award of the contract. The CCRS is web-based and can be accessed at the following Internet address: <https://portlandoregon.diversitycompliance.com/>.

City-Owned Projects means projects that have an engineer’s estimate of \$150,000 or more.

City Resources means funds provided by the City (regardless of the source) in the form of loans, grants or payments. City Resources also include the difference between the purchase price paid by a private entity and the fair market value of such property.

City – Sponsored Projects means contracts that provide for the disposition of the city-owned property and/or provide City Resources that result in a privately-owned project that has \$150,000 or more of Hard Construction Costs.

Utilization Plan (UP) includes all subcontractors and material suppliers that have been engaged to perform work on the project.

COBID firms includes firms certified by the State of Oregon Certification Office for Business Inclusion and Diversity as either: Disadvantaged (D), Minority (M), Women (W), Emerging Small Business (ESB) or Service Disabled Veteran-Owned Business Enterprises (SDVBE).

II. ASPIRATIONAL GOALS

The Program has an aspirational goal of twenty percent (20%) of Hard Construction Costs for subcontract utilization of COBID firms on projects subject to the Program (the “Aspirational Goal”). The City encourages contractors to attain 14 of the 20% of the Aspirational Goal by utilizing D/M/WBE firms. The City encourages Contractors to diversify their subcontractor utilization of COBID firms from all available divisions of work.

A directory of COBID firms can be found by visiting the State of Oregon’s COBID website at: <http://www4.cbs.state.or.us/ex/dir/omwesb/>.

III. SUBMISSION OF REQUIRED DOCUMENTATION FOR CITY-OWNED PROJECTS SUBJECT TO COMPETITIVE BIDDING

- A. UTILIZATION PLAN (UP) - DUE from the apparent low bidder WITHIN 24 HOURS OF NOTIFICATION BY CITY OF PORTLAND. A completed UP is required to be submitted electronically for the Subcontractor Equity Program. On-screen instructions in the CCRS will guide you through the UP submittal process. The UP must list ALL Subcontractors to be used on the project, their corresponding type of work, their subcontract amount, and certification status, if applicable, regardless of the dollar amount. If the project includes bid alternates for additional work, bidders shall list ALL first-tier subcontractors that will be used if the City elects to do such additional work. Bidders also must identify all types of work that will be self-performed. After submission of the UP, you may review your Dashboard for status updates.
- B. FORM 2 – COBID firms BIDS RECEIVED LOG: DUE UPON CITY REQUEST FROM THE APPARENT LOW BIDDER IF ASPIRATIONAL GOALS ARE NOT MET
 - 1. If the CCRS shows that the Aspirational Goal has not been met, the apparent low bidder must submit Form 2 and additional documentation as required. The UP will become a part of the resulting contract for the project. Failure by the apparent low bidder to complete and submit the UP in the time specified, may result in the bid being determined non-responsive and the bid will be rejected. To submit Form 2 and additional documentation, click Attach Waiver Files. When finished click Save Waiver Details before leaving the plan or attempting to complete another step.
 - 2. Bidders must have contacted COBID firms in writing to advise them of potential subcontracting opportunities and ensure that they have an equal opportunity to compete for work by providing all subcontractors the same information and informing them of the date and time that sub-bids are due.
 - 3. Bidders must have obtained a minimum of three (3) written bids from COBID firms that specialize in the type of work that will be subcontracted. Failure to obtain three (3) written bids from COBID firms may result in bid rejection. Bidders shall submit additional information and provide clarification upon request.
 - 4. If for any reason the apparent low bidder is not awarded the contract or its bid is rejected, the next apparent low bidder will be required to submit their UP and upon review a determination will be made as to the need for a Form 2 submittal.

IV. SUBMISSION OF REQUIRED DOCUMENTATION FOR CITY-SPONSORED PROJECTS NOT SUBJECT TO COMPETITIVE BIDDING

- A. UTILIZATION PLAN (UP) - DUE from the apparent low bidder WITHIN 24 HOURS OF NOTIFICATION BY CITY OF PORTLAND.** A completed UP is required to be submitted electronically for the Subcontractor Equity Program. On-screen instructions in the CCRS will guide you through the UP submittal process. The UP must list ALL Subcontractors to be used on the project, their corresponding type of work, their subcontract amount, and certification status, if applicable, regardless of the dollar amount. If the project includes bid alternates for additional work, bidders shall list ALL first-tier subcontractors that will be used if the City elects to do such additional work. Bidders also must identify all types of work that will be self-performed. After submission of the UP, you may review your Dashboard for status updates.
- B. FORM 2 – COBID firms BIDS RECEIVED LOG: DUE UPON REQUEST FROM APPARENT LOW BIDDER IF ASPIRATIONAL GOALS ARE NOT MET**
- a. If the CCRS shows that the Aspirational Goal has not been met, the apparent low bidder must submit Form 2 and additional documentation as required. The UP will become a part of the resulting contract for the project. Failure by the apparent low bidder to complete and submit the UP in the time specified, may result in the bid being non-responsive and rejected. To submit Form 2 and additional documentation, click Attach Waiver Files. When finished click Save Waiver Details before leaving the plan or attempting to complete another step.
 - b. Bidders must have contacted COBID firms in writing to advise them of potential subcontracting opportunities and ensure that they have an equal opportunity to compete for work by providing all subcontractors the same information and informing them of the date and time that sub-bids are due.
 - c. Bidders must have obtained a minimum of three (3) written bids from COBID firms that specialize in the type of work that will be subcontracted. Failure to obtain three (3) written bids from COBID firms may result in bid rejection. Bidders shall submit additional information and provide clarification upon request.
 - d. If for any reason the apparent low bidder is not awarded the contract or its bid is rejected, the next apparent low bidder will be required to submit their UP and upon review a determination will be made as to the need of a Form 2 submittal.

V. REQUIREMENTS FOR ALL PROJECTS SUBJECT TO THE PROGRAM

A. MONTHLY SUBMITTAL OF SUBCONTRACTOR PAYMENTS: DUE BY THE 15th OF EACH MONTH

The Contractor shall submit subcontractor payments via the CCRS by the 15th of each month once work has commenced and shall ensure that subcontractors are confirming payments reported to them in the system. Subprime firms are also responsible for reporting participation of lower tier subcontractors.

A Subcontractor Report will be provided to the Contractor on the first of the month. If any changes occur to the subcontract value during the reporting period, the contractor shall correct the Subcontract Value on the Report and submit this information to the Contract Compliance Specialist via the CCRS no later than the 15th of each month.

B. SUBCONTRACTOR CHANGES AFTER BID SUBMISSION

1. If any subcontractor is added or replaced after the bid is submitted or the contract is awarded, the selected Contractor shall make good faith efforts to solicit bids from COBID firms for the work to be performed.
2. The Contractor must contact COBID firms in writing to advise them of potential subcontracting opportunities and ensure that they have an equal opportunity to compete for work by providing all subcontractors the same information and informing them of the date and time that sub-bids are due.
3. The Contractor must obtain a minimum of three (3) written bids from COBID firms that specialize in the type of work that will be subcontracted. The Contractor shall submit additional information and provide clarification upon request.
4. All subcontractor changes/requests shall be made in the CCRS and will include supporting documentation of the foregoing prior to making any changes. A tutorial for adding subcontractors can be found here: <https://portlandoregon.diversitycompliance.com/Help/Tutorial/TutorialView.asp?XID=5666&TFL=RequestingASub>.
5. The Contractor shall not add, delete, or replace any subcontractor without prior written consent of the Compliance Manager.

C. REVIEW OF RECORDS

In the event that the City reasonably believes that a violation of the requirements of the Subcontractor Equity Program has occurred, the City may review the records and pertinent documentation of the Contractor, as well as any subcontractor, to determine whether a violation has occurred.

D. PENALTIES FOR NONCOMPLIANCE

A Contractor's failure to comply with the Subcontractor Equity Program may result in a breach of contract, possible disqualification of the Contractor's ability to bid on or receive future contracts, including as provided under Portland City Code 5.34.530, and/or the assessment of penalties. In the event of a breach of contract, in addition to any other remedies that the City may have, the City may take any or all of the following actions:

1. The City may withhold all or part of any progress payment(s) until the Contractor has remedied the breach of contract. In the event that progress payments are withheld, the Contractor shall not be entitled to interest on such payments. If a subcontractor has not complied with the Subcontractor Equity Program, the City may elect to withhold only such subcontractor's portion of the progress payment.
2. The City has an expectation that if a Contractor is awarded a contract, and identifies that it intends to subcontract with COBID firms, then the Contractor will actually use such COBID firms. Therefore, the contract will include the following provisions:
 - a. The Contractor acknowledges and agrees that it would be difficult, if not

impossible, to assess the actual damage incurred by the City for the Contractor's failure to comply with the Subcontractor Equity Program. If the Contractor fails to comply with the provisions of Section 5.B, the Contractor agrees to pay the sum of \$2,000 for each violation. These penalties are independent of any liquidated damages that may be assessed under other provisions of the contract.

- b. If the Contractor fails to utilize any COBID firm as identified on the UP, or in its Contracting Plan, the Contractor shall pay \$2,000 for each violation.
- c. Exceptions to this requirement are for approved change orders, reductions in scope of work as requested by the City, failure of a COBID firm to complete work or having breached the subcontract, and substitution requests approved by the City.

VI. ATTACHMENTS:

COBID firm Bids Received Log (Form 2)

All forms are available on the Procurement Services website at: <http://www.portlandoregon.gov/bibs/45307>

CITY OF PORTLAND COBID FIRM BIDS RECEIVED LOG
FORM 2

Bidder Name:

Project Name:

Name of COBID Firm	Certification Type (DBE, MBE, WBE, ESB, SDVBE)	Division of Work	Date of Written Contact	Date of Phone Contact	Bid Amount	Reason Not Used (Price, Scope, or Other. If Other, explain in Notes)	Notes

SAMPLE - Submit via Contract
Compliance Reporting System

WORKFORCE TRAINING & HIRING PROGRAM

Contractor Checklist

This program applies to contracts of \$200,000 or more and subcontracts of \$100,000 or more

The City's Workforce Training and Hiring Program (the "Program") applies to all City-Owned Projects and all City-Sponsored Projects as described below.

City-Owned Projects means projects that have contracts of \$200,000 or more.

City Resources means funds provided by the City (regardless of the source) in the form of loans, grants, or payments. City resources also include the difference between the purchase price paid by a private entity and the fair market value of such property.

City-Sponsored Projects means contracts that provide for the disposition of City-owned property and/or provide City Resources that result in a privately-owned project that has \$200,000 or more of Hard Construction Costs.

It is the Contractor's responsibility to read and fully understand this section of the bid specifications and to comply with all provisions of the program, regardless of whether they appear on this checklist. *Contractors shall include in their bid all costs associated with complying with the Workforce Program.* An 18% aspirational goal for minorities, and 9% for females has been set on City-Owned/Sponsored construction projects for apprentices and journey level workers.

The prime contractor and all applicable subcontractors are required to provide all workforce utilization related data electronically in LCP Tracker. The prime contractor is responsible for ensuring all subcontractors have completed all requested items.

Information related to contractor access of the system will be provided to a designated point of contact upon award of the contract. LCP Tracker is web-based and can be accessed at the following Internet address: www.lcptracker.net.

CHECKLIST

For Contracts of \$200,000 or More and Subcontracts of \$100,000 or More, Contractors Must:

1. Submit a Workforce Plan (Exhibit 2) to City prior to submittal of first payroll report, or as otherwise designated. A copy of the Workforce Plan should be downloaded, filled out and then uploaded into LCP Tracker. The Plan should detail your approach and strategies to achieve the targeted workforce goals established by the City.
2. Before starting work on this project confirm registration as a Training Agent with the Bureau of Labor & Industries (BOLI), Apprenticeship & Training Division. Not a BOLI registered training agent? Contact BOLI (971-673-0760) or City of Portland (503-823-5047) for further information.
3. Ensure that a minimum of 20% of labor hours in each apprenticeable trade are worked by state registered apprentices. Contractors shall fulfill the 20% apprenticeship requirement without exceeding the apprentice ratios approved by the applicable apprenticeship program, if working in excess of 300 hours in any given trade.
4. Strive in good faith to meet the diversity goals of employing women and minorities (both journey and apprentice level workers).
5. Make all reasonable and necessary efforts to employ a workforce that reflects the diversity of the City of

Portland, including recruitment of a diverse workforce through the unions, the apprenticeship programs and other community resources, as described herein.

6. Maintain written documentation of all requests for workers from the unions, apprenticeship programs, and community organizations.
7. When an apprentice is hired: Notify the City's Contract Compliance Specialist assigned to the project.
8. Submit weekly certified payroll reports via the LCP Tracker system no later than the 5th of each month.

For additional information or questions, please contact the Contract Compliance Specialist assigned to the project or the City's Workforce Program Coordinator at 503-823-6888.

WORKFORCE TRAINING AND HIRING PROGRAM

I. PURPOSE

A. General Program Description

The Portland City Council has directed that all Bureaus and Departments maximize apprenticeship and employment opportunities for minorities, women and economically disadvantaged workers in the construction trades (ref. City Ordinance No. 167374, Feb. 16, 1994 and County Ordinance No. 861, July 11, 1996). Their goals include a) ensuring that the City does business with contractors whose workforce reflects the diversity of the workforce found in the city of Portland and Multnomah County, and b) that their contracting dollars provide fair and equal opportunities to the jurisdictions' diverse populations.

The Workforce Training & Hiring Program ("Workforce Program") is administered for the City of Portland, by Procurement Services. The Workforce Program applies to all projects estimated at \$200,000 or more and to each subcontractor having a subcontract of \$100,000 or more on the project. The Contractor and all subcontractors are encouraged to fulfill the program requirements even if their contracts are less than these amounts.

Contractors shall make reasonable efforts to ensure that their workforce reflects the diversity of the city of Portland and Multnomah County.

One way contractors can make reasonable efforts to ensure that their workforce is diverse is to recruit, train and employ minorities and women whenever possible. This portion of the Contract establishes requirements regarding that recruitment, training and employment.

For purposes of the Workforce Program specifications, the following definitions shall apply:

The "**Contract**" shall mean the contract awarded as a result of these bid specifications.

"**Contractor**" shall mean the Prime Contractor to whom a Contract is awarded, and any subcontractors with subcontracts of \$100,000 or more.

The term "**minorities**" shall include members of either sex who are African-Americans, Hispanic Americans, Asians or Pacific Islanders, Native Americans or Alaskan Native Americans.

"**Owner**" shall mean the government agency that awarded the Contract, or leveraged public involvement in the project through a loan or development agreement.

The "**project**" shall include all work performed pursuant to the Contract.

B. Organization of Program Requirements

The Workforce Program specifications are divided into several parts.

Section II - refers to the action the PRIME must take in order to be eligible for award of a contract.

Section III - lists the actions that must be taken by the PRIME to meet contractual obligations.

Section IV - refers to remedies available to the Owner if a PRIME fails to meet the requirements of the Workforce Program specifications.

Section V - refers to the Owner's ability to monitor compliance with the Workforce Program specification by

examination of PRIME and subcontractor records.

II. ACTIONS REQUIRED PRIOR TO BEGINNING THE PROJECT

The PRIME shall thoroughly read this Workforce Program specification and commit to perform all requirements described herein. The PRIME shall submit, before submittal of the first payroll report, a Workforce Plan, which demonstrates how the workforce on this project will fulfill all program requirements, including utilization of apprentices and targeted diversity goals. A copy of the Workforce Plan should be downloaded, filled out and then uploaded into LCP Tracker.

III. ACTIONS REQUIRED TO SATISFY CONTRACTUAL OBLIGATIONS

A. Make Reasonable Efforts to Have Diverse Workforce

A PRIME must make all necessary and reasonable efforts to have a workforce that reflects the diversity of the city of Portland and Multnomah County and is reasonably consistent with the availability of qualified women and minorities. This requirement is in addition to any other requirement of this portion of the Contract.

1. The PRIME and its subcontractors with subcontracts of \$100,000 or more, at any tier level, shall strive to achieve the workforce diversity goal of 18% minority and 9% female hours (including both journey level and apprentice workers) on the project.
2. Provide written documentation of its good faith recruitment efforts. Contractors must follow the process for hiring, requesting, recruiting or replacing workers described in Section III, subsection F. This process is considered by the City to be the minimum effort to recruit a diverse workforce.
3. The failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall not excuse the Contractor's obligations under this section of the specifications.

B. Ensure Compliance by Certain Subcontractors

1. *The PRIME shall ensure that each subcontractor having a subcontract of \$100,000 or more, at any tier, shall comply with all of the provisions of the Workforce Program specifications.* Contractors shall include in their price all costs associated with this requirement. No change order will be executed in order for the PRIME to comply with the Workforce Program specifications.
2. The PRIME shall provide a copy of this Workforce Program specification to all subcontractors with contracts of \$100,000 or more executed for the project.

C. Register as a Training Agent

The PRIME shall register with the Oregon Bureau of Labor and Industries (BOLI) as a Training Agent and ensure that all subcontractors who have contracts in the amount of \$100,000 or more are registered as Training Agents, prior to beginning work. Registration as a Training Agent in a specific trade is not required if there are no training opportunities in that trade on the project, based on the maximum ratio allowed by BOLI.

1. Training programs approved by and registered with BOLI may be used to fulfill training requirements under the Workforce Program specifications. Other training alternatives must be approved by the City's Workforce Program Coordinator.
2. Training is intended to be primarily on-the-job training in apprenticeable crafts, and does not include classifications such as flag person, timekeeper, office engineer, estimator, bookkeeper, clerk/typist, fire fighter, or secretary. Hours performed in crafts, which are not apprenticeable occupations are exempt from the training requirements.
3. Exemptions to the training requirements must be approved by the Owner in writing prior to starting work on the project. Written requests for exemptions related to the training requirements will be considered by the Owner only for extreme circumstances during the course of the project, and must be approved in writing. All requests to exempt all or any portion of the work on a project shall be submitted to the Owner 14 calendar days before any work on the project begins. All exemptions must be approved by the Workforce Program Coordinator. *Please note: Procedures for granting exemptions are subject to change. For the most recent updates, please visit: <https://www.portlandoregon.gov/citycode/?c=26882&a=408189>.*

D. Submit Documentation

The PRIME shall submit documentation regarding the following subjects to the Owner. The Owner's failure to object to documentation submitted by the PRIME or subcontractor shall not relieve them of the requirements of the Workforce Program specifications.

1. ***Training Agent Status***
The PRIME and all required subcontractors listed on the Utilization Plan must submit proof to the Contract Compliance Specialist that they are registered Training Agents with BOLI prior to beginning any work on the project.
2. ***Subcontractor Workforce Information***
A Workforce Plan, must also be submitted for each subcontractor with a contract of \$100,000 or more, prior to submission of their first payroll report, or within 5 calendar days after the execution of the applicable subcontract, whichever occurs first. A copy of the Workforce Plan should be downloaded, filled out and then uploaded into LCP Tracker. Work by a subcontractor shall not begin prior to submission of such documentation.
3. ***Prime and Subcontractor Reporting After Work Begins***
Weekly Certified Payroll Reports must be submitted by the PRIME and any subcontractor having a subcontract of \$100,000 or more, via LCP Tracker, no later than the 5th of each month and will be used to track attainment toward the City's apprentice requirement and diversity goals. All hours subject to prevailing wage rates on public projects, in addition to supervisors, foremen and superintendents, shall be reported.

E. Use of Apprentices

The PRIME shall:

1. Ensure that a minimum of 20% of labor hours in each apprenticeable trade performed on the project by the PRIME, and subcontractors with subcontracts of \$100,000 or more, are worked by state registered apprentices throughout the duration of the project. The PRIME and subcontractors shall fulfill the 20% apprenticeship requirement without exceeding the apprentice ratios approved by the applicable apprenticeship program, if working in excess of

300 hours in any given trade.

2. Pay all apprentices the wages required by any applicable collective bargaining contract or pursuant to state or federal law and regulations.
3. Not use workers previously employed at journey-level or those who have successfully completed a training course leading to journey-level status to satisfy the requirements of these provisions.
4. Notify the Contract Compliance Specialist when an apprentice is hired for this project.
5. Count apprentice hours as follows:
 - (a) Hours worked on the project by apprentices enrolled in state-approved apprenticeship programs. **If** the Contractor is unable to fulfill its 20% requirement, then the Contractor may also use methods (b) and (c) below;
 - (b) Hours worked on the project by apprentices who are required to be away from the job site for related training during the course of the project, but only if the apprentice is rehired by the same employer after completion of training; and
 - (c) Hours worked on the project by graduates of state-registered apprenticeship programs, provided that such hours are worked within the 12-month period following the apprentice's completion date.

F. Hiring, Requesting, Recruiting or Replacing Workers

Contractors must follow all of these steps when hiring, requesting, recruiting or replacing workers:

For Apprentices:

1. Using the Worker Request Form, contact the appropriate apprenticeship program or dispatch center to request apprentices who are enrolled in the apprenticeship program; and
2. Request female or minority apprentices from the union or open shop apprenticeship program if such an action will help remedy historical underutilization in the Contractor's workforce.
3. If the apprenticeship program is unable to supply an apprentice and if the program is open for applications or allows direct entry from the Oregon Employment Division, make reasonable and necessary efforts to recruit apprentice applicants from WorkSource at the Oregon Employment Department, and seek to enroll them into an apprenticeship program.

Worksource Oregon is Oregon's largest source for job ready applicants:

- Recruitment Services are local, statewide, and nationwide
- Computerized job match system matches applicants to job qualifications
- On-the-job training resources available to offset cost of new hires
- Go to: www.imatchskills.org or call 503-257-HIRE

For All Workers:

1. Make reasonable and necessary efforts to employ a diverse workforce. Such actions should include requests for minority and female applicants. Contractors are notified that direct hiring of employees

(such as "walk-ons") without providing notification of that job opportunity may not be sufficient to establish the Contractor's efforts to satisfy the diversity goals; and

2. Document employment efforts. Use the Worker Request Form to keep a **written** record of requests to:
 - a. Union halls for signatory contractors;
 - b. Union or open shop apprenticeship programs;
 - c. The Oregon Employment Department. Go to: www.imatchskills.org or call 503-257-HIRE;
 - d. State-registered pre-apprenticeship programs:
http://www.oregon.gov/BOLI/ATD/pages/a_ag_partners.aspx
3. Documentation will be requested by the Owner, if a Contractor is not following their Workforce Plan or meeting the workforce diversity goals, if it appears that the Contractor has not made reasonable and necessary efforts. When requested, the Contractor shall provide that documentation to the Contract Compliance Specialist within 7 calendar days.

NOTE: Contractors may contact the Contract Compliance Specialist for assistance related to any of the above issues.

IV. CONSEQUENCES OF NONCOMPLIANCE WITH WORKFORCE PROGRAM REQUIREMENTS

The Owner's commitment to this program is reflected, in part, by the cost of administering the program. Failure to meet the requirements of this section of the specifications negates such funding and impairs the Owner's efforts to promote workforce diversity and to provide fair and equal opportunities to the public as a whole as a result of the expenditure of public funds. Therefore, the parties mutually agree that failure to meet the requirements of this section of the specifications, including but not limited to the submission of required documentation, constitutes a material breach of the Contract.

In the event of a breach of this section of the Contract, the Owner may take any or all of the following actions:

A. Withholding Progress Payments

The Owner may withhold all or part of any progress payment or payments until the PRIME has remedied the breach of Contract. In the event that progress payments are withheld, the PRIME shall not be entitled to interest on said payments.

If a subcontractor(s) is responsible for noncompliance with the Workforce Program requirements, the Owner may choose to withhold only their portion of the progress payment.

B. Retain Sums as Damages for Failure to Comply with Workforce Program Specifications

The parties mutually agree that it would be difficult, if not impossible, to assess the actual damage incurred by the Owner for the PRIME's failure to comply with the Workforce Program specifications. The parties further agree that it is difficult, if not impossible, to determine the cost to the Owner when workforce opportunities are not provided. Therefore, if the PRIME fails to comply with the Workforce Program provisions of this Contract, the PRIME agrees to pay the sum of \$250 per day for each day of missed apprenticeship hours or until the breach of Contract is remedied. Damages may be assessed for failure to meet the 20% apprenticeship training requirements by the PRIME and each required subcontractor in each trade employed. Damages will be calculated based on the training hours not provided at a rate of \$250 per day. For example, if the Contractor was required to provide 200 hours of carpenter training (20% of 1,000 total carpenter hours), and the Contractor only provided 150 training

hours, then the difference (50 hours) is divided by 8 (one day of work) to determine the number of days of undelivered training. $(50/8 = 6.25 \times \$250 = \$1,562.5)$.

Damages may also be assessed for failure to fulfill the inclusive hiring process described in Section III, subsection F.

These damages are independent of any liquidated damages that may be assessed due to any delay in the project caused by the Contractor's failure to comply with the Workforce Program provisions of the Contract.

C. Retain Sums as Liquidated Damages for Delay

The PRIME agrees that any delay to the specified contract time as a result of the PRIME's failure to comply with the requirements of these specifications shall subject the PRIME to the amount of liquidated damages specified elsewhere in the Contract.

D. Notification of Possible Debarment

By executing this Contract, the PRIME agrees that it has been notified that failure to comply with the requirements of this portion of the Contract may lead to the PRIME's disqualification from bidding on and receiving other Owner contracts.

E. Other Remedies

The remedies that are noted above do not limit any other remedies available to the Owner in the event that the PRIME fails to meet the requirements of the Workforce Program specifications.

V. REVIEW OF RECORDS

In the event that the Owner reasonably believes that a violation of the requirements of the Workforce Program specifications has occurred, the Owner is entitled to review the books and records of the PRIME and any subcontractors employed on the project to which the requirements of these specifications are applicable to determine whether such a violation has or has not occurred.

In the event that the PRIME or any subcontractor fails to provide the books and records for inspection and copying when requested, such failure shall constitute a material breach of this Contract and permit the imposition of any of the remedies noted in Section IV above, including the withholding of all or part of any progress payment.

ATTACHMENTS:

Recommended Recruitment & Retention Practices
Apprenticeship Ratio Data

RESOURCES:

Copies of all required forms, including the Workforce Plan and Worker Request Form can be downloaded in the LCP Tracker system at www.lcptracker.net or are available on the City's website at: <https://www.portlandoregon.gov/brfs/42255>

For questions about the City's Workforce Training and Hiring Program requirements, visit: <https://www.portlandoregon.gov/brfs/42255>

For information on State-Approved Apprenticeship Programs visit the Bureau of Labor and Industries, Apprenticeship and Training Divisions website: <http://www.oregon.gov/BOLI/ATD/pages/index.aspx>.

For procedures related to granting exemptions to the training requirements, please visit: <https://www.portlandoregon.gov/citycode/?c=26882&a=408189>.

For a list of community resources to help with the recruitment of women and minorities, please visit: http://www.oregon.gov/BOLI/ATD/pages/a_ag_partners.aspx

If you have questions after reading the information contained herein and visiting the resources above, please contact a Contract Compliance Specialist or the City's Workforce Program Manager at:

CATHLEEN MASSIER	823-6888	cathleen.massier@portlandoregon.gov	Program Manager
ANGELA PACK	823-6883	angela.pack@portlandoregon.gov	Contract Compliance
PAULA WENDORF	823-6889	paula.wendorf@portlandoregon.gov	Contract Compliance

RECOMMENDED GOOD FAITH RECRUITMENT & RETENTION PRACTICES

A. Recruitment Efforts

Good faith recruitment efforts are those intense, aggressive, sincere, and result-oriented actions taken by the Contractor designed to accomplish the objectives of the City Workforce Training & Hiring Program, Good faith recruitment efforts include, but are not limited to:

1. Work aggressively with Contractor's Joint Apprenticeship Training Committee (JATC) to recruit minorities, women and disadvantaged individuals. Provide evidence of these efforts.
2. Assist the JATC by conducting a workshop with minority and women employees to enlist their assistance as recruiters and request their ideas on how to increase employment of underutilized groups.
3. Support the efforts of the Contractor's JATC by giving all apprentices referred to the Contractor a fair chance to perform successfully, allowing for possible lack of previous experience. Recognize that the Contractor is responsible for providing on-the-job training, and that all apprentices should not be expected to have previous experience.
4. Participate in job fairs, school-to-work, and community events to recruit minorities, women, and disadvantaged individuals into the construction trades.
5. Allow scheduled job site visits by participants in community programs, as safety allows, increasing awareness of job and training opportunities in the construction trades.
6. Keep applications of those not selected for an opening. Contact when opening occurs.

B. Retention Efforts

The Contractor shall endeavor to retain minorities, women, and disadvantaged individuals by implementing steps such as the following:

1. Maintain a harassment-free work place.
2. Ensure that employees are knowledgeable about the company's policies if they need to report a harassment problem.
3. Make reasonable attempts to keep apprentices working and train them in all work processes described in the apprenticeship standards.
4. Review and disseminate, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions.
5. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
6. Take steps to reduce feelings of isolation among minorities and women to curb hostile attitudes and behavior (e.g., have several minorities and women at the job site, provide access to support group system).
7. Provide adequate toilet facilities for women on the job site.
8. Match minority, female, or disadvantaged apprentices who may need support to complete their apprenticeship programs with a journey-level mentor.

APPRENTICESHIP RATIO DATA

The following data may be used to determine the ratio of apprentices on a jobsite in proportion to journey-level workers. The ratios that apply are those listed in the standards of the apprenticeship committee to which the Training Agent (contractor) is a member. If the applicable trade is not listed, contact the Bureau of Labor and Industries at (971) 673-0760.

TRADE	1 st Apprentice	2 nd Apprentice	Maximum
Asbestos/Insulation Workers	1:1	1:3	
Brick/Marble/Terrazzo/Tile Finisher	1:1	1:3	
Bricklayer/Masonry	1:1	1:3	
Carpenter	1:1	1:1	1:1 for first three apprentices; 1:5 thereafter
Carpet Installers/Floorlayers	1:1	1:3	
Cement Masons	1:2; 1:1 non-union	1:3	
Drywall Applicator (Ext/Int Specialists)	1:1	1:1	1:1 for first three apprentices; 1:5 thereafter
Drywall Finisher (Taper)	1:1	1:3	1:3 thereafter
Electricians			
Inside	1:1	1:3	
Limited Energy	1:1	1:1	
Limited Maintenance	1:1	1:2	
Elevator Mechanic	1:1	1:3	
Environmental Control System (HVAC)	1:1	1:1	Additional Apprentices at 1:3
Glass Installer (Glazier)	1:1	1:3	
Hod Carrier/Mason Tender	1:1	1:5	
Ironworker	1:1	1:3	
Laborer	1:1	1:5; 1:3 non-union	1:10 union (10 max)
Maintenance Mechanic	1:1	1:3	
Millwright	1:1	1:1	1:1 for first three apprentices; 1:5 thereafter
Operating Engineer	1:1-4	2:5-9	3:10-19; 4:20-24; 5:25-29; 30 or more 1:5
Painter	1:1	1:3	
Traffic Control	1:1	1:4	
Pile Driver	1:1	1:1	1:1 for first three apprentices; 1:5 thereafter
Pipefitter	1:1	1:1	1:3 thereafter
Plasterer	1:1	1:3	
Plumber	1:1	1:1	1:1 for first two apprentices; 1:3 thereafter
Roofer	1:1	1:1	
Scaffold Erector	1:1	1:1	1:1 for the first five apprentices; 1:5 thereafter
Sheet Metal Worker	1:1	1:1	1:1 for the first two apprentices; 1:3 thereafter
Residential	1:1	1:3	
Sign Maker/Erector	1:1	1:1	
Sprinkler Fitter	1:1	1:1	
Steamfitter	1:1	1:1	1:1 for the first two apprentices; 1:3 thereafter
Tile/Marble Setter	1:1	1:3	
Truck Driver	1:1	1:1	

Note: Ratios may change pursuant to actions taken by the Oregon State Apprenticeship & Training Council. For the purposes of this contract, the ratios approved by BOLI on the date the bid is advertised shall prevail.

GENERAL CONDITIONS

DIVISION 1 B GENERAL CONDITIONS

The General conditions are those set out in the City of Portland Standard Construction Specifications Division 1 B, January 2002 Edition, as revised in January 2006, and are included herein by reference. A copy is available at Procurement Services, 1120 SW 5th Avenue, Room 750, Portland, OR, 97204, or available on-line at <http://www.portlandonline.com/shared/cfm/image.cfm?id=10388>.

END OF SECTION

DOCUMENT 00 0110

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- 26 0500 Common Work Results for Electrical

26 0519	Low Voltage Electrical Power Conductors and Cables
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Appendix

Lead-Based Paint Inspection Report

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FORM 00 4325

PRE AWARD SUBSTITUTION REQUEST FORM

ORIGINAL TO: Rachel Beane, Senior Buyer Specialist (Procurement Services)
1120 SW Fifth Avenue, Room 750
Portland, Or. 97204-1933
(503) 823-9293

PROJECT: Electronic Locking Project

According to the requirements of Section 01 2500 "Substitution Procedures", we hereby submit for your consideration the product described below as a substitution for the specified product indicated.

1. Specified Product:

Name: _____

Section: _____

2. Proposed Product:

a. Brand Name: _____

b. Model/Catalog No.: _____

c. Manufacturer: _____
(Name)

(Address) (Zip) (Telephone)

d. Distributor: _____
(Name)

(Address) (Zip) (Telephone)

e. Proposed product meets the following standards:

ANSI _____ F.S. _____ ASTM _____

Others _____

and is superior to the above in the following ways: _____

f. Proposed product will require the following changes in the Work:

1) Space Requirements: _____

2) Dimensions on Drawings: _____

3) Adjacent Work: _____

4) Installation Procedures: _____

g. Proposed product differs from specified product in the following way: _____

h. Product with result in a cost reduction totaling \$ _____ and/or a
reduction in installation time totaling _____ days.

3. Reason for Substitution: _____

4. Supporting Data: The following laboratory tests, performance and test data, certifications, guarantees/warranties, and other supporting technical data are attached:
5. Guarantees: Manufacturers' guarantees of the proposed and specified items are:
[] SAME [] DIFFERENT (explain on separate sheet)
6. Certification: The undersigned certifies that the proposed product is equal or superior in all respects to the product specified.
7. Submitted By:

Firm: _____
(Name) (Telephone)

(Address) (Zip) (FAX)

By: _____ Title _____
(Please Type or Print)

Signature: _____ Date: _____

8. Owner:

[] Accepted [] Accepted as noted [] Not Accepted

By: _____ Date _____

Remarks: _____

END OF FORM

DOCUMENT 00 7300

SUPPLEMENTARY CONDITIONS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION – ‘B’

The following supplements modify, change, delete from, or add to the General Conditions of the Contract for Construction – ‘B’. Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph, or Clause shall remain in effect.

101.01 DEFINITIONS

Markup: Specified percentages applied to the sum of the direct costs for any additive or deductive change in the Work in order to compensate for the indirect costs of the changes. Markup includes but is not limited to profit and overhead, general requirements, general conditions, insurance, bonding, personnel, office equipment and supplies, incidental tools and supplies used or incorporated into the work.

101.02 ABBREVIATIONS

CSI: The correct reference is the Construction Specifications Institute.

102.08 INSURANCE

Replace subparagraph D.1 with the following (changes underlined for emphasis):

D. Liability and Property Damage Insurance

1. The Contractor shall obtain and maintain during the life of this contract, Commercial General Liability Insurance covering bodily injury and property damage insurance to protect the Contractor and the Owner from any and all claims for damage or bodily injury, including death, that may arise from the work, regardless of whether that work is performed by the Contractor or a Subcontractor at any tier. That insurance shall contain the following policy limits for each occurrence:

Bodily Injury:	<u>\$ 2,000,000</u>
For Property Damage:	<u>\$ 2,000,000</u>
<u>Aggregate:</u>	<u>\$ 4,000,000</u>

Replace subparagraph D.3.b with the following (change underlined for emphasis):

D. Liability and Property Damage Insurance

3. The insurance coverage obtained by the Contractor:

- b) Shall name the Owner, its officers, employees and agents as additional insureds. If for any reason Contractor cannot obtain such coverage from its insurer, it shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the City of Portland, its officers, employees and agents as Named Insured with not less than a \$2,000,000 limit per occurrence. This policy must be keep in effect for 24 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to its issuance of a Notice to proceed.

104.02 PRECEDENCE OF CONTRACT DOCUMENTS/CONFLICTS

Replace paragraph D. with the following:

- 1. Change Orders.
- 2. Amendments to Contract.
- 3. Contract.
- 4. Addenda to Bid Documents.
- 5. Bid Documents.
- 6. Permits.
- 7. Supplementary Conditions to the General Conditions of the Contract 'B'.
- 8. General Conditions of the Contract for Construction 'B'.
- 9. Division 01 General Requirement Specifications.
- 10. Technical Specifications.
- 11. Plans (drawings).
- 12. Information furnished by written notes and or schedules on drawings.
- 13. Information provided by lines on drawings.

104.04 EXTRA WORK AND CHANGES

Replace second sentence in paragraph B. (change underlined for emphasis):

- B. The Contractor is responsible to provide Notice of such order to the Surety if the cost of the changed or Extra Work exceeds 25% of the total original Contract Amount.

105.10 PROTECTION AND RESTORATION OF PROPERTY

Replace paragraph D. with the following:

- D. Contractor shall protect all trees, lawns and planted areas not designated for removal or not part of the Work.

105.17 HAZARDOUS SUBSTANCES ENCOUNTERED DURING CONSTRUCTION AND OTHER ENVIRONMENTAL LAWS

Add to paragraph F., in the second line (change underlined for emphasis):

“....oil spillage and used-oil disposal, lead based paint removal and asbestos abatement.”

107.08 PERMITS

Replace paragraph A. with the following 3 paragraphs:

- A. Contractor is responsible for complying with any Federal, State and municipal laws, Codes, permits and regulations applicable to the performance of the Work.
- B. Owner will pay the building permit fees charged by the Bureau of Development Services, including systems development charges and Portland Bureau of Transportation right-of-way Permit fees. If additional costs for permit-related inspections beyond the inspections included with the building permit fee are incurred due to nonconforming Work, inspection scheduling issues or any other reason, such costs will be the sole responsibility of the Contractor.
- C. The Contractor shall, without additional expense to the Owner, obtain and pay for trade Permits and any other licenses or fees required by the Work unless expressly provided otherwise in the Contract Documents.

Renumber existing paragraphs B. and C. as paragraphs D. and E.

108.02 MEETINGS

Replace subparagraph C.2. with the following (changes underlined for emphasis):

- C. Pre-Construction Meeting
 - 2. The meeting shall be attended by the Owner's Project Manager and Construction Manager, the Owner's Representative, Contractor, Contractor's superintendent,

major Subcontractors, park supervisor, major suppliers and the inspector from the City's urban forestry department (if required).

Replace subparagraph C.3.b) with the following (change underlined for emphasis):

C. Pre-Construction Meeting

3. The agenda shall consist of the following items, and may be supplemented at the suggestion of the Contractor:
 - b) Review of requirements for the use of the site, utilities, safety, tree protection and erosion control (if required).

Replace subparagraph C.4. with the following (changes underlined for emphasis):

C. Pre-Construction Meeting

4. The Contractor shall provide the following information at the Pre-Construction Meeting: the Project schedule, the Schedule of Values, a list of all Subcontractors to be used on the Project, emergency telephone numbers, site specific safety plan and erosion control plan.

108.03 NOTICE TO PROCEED

Clarify in subparagraph A.2. (changes underlined for emphasis):

2. Before starting Work, the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by ORS 279C.830(2) unless otherwise exempt under these provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt.

108.04 CONTRACT TIME

Replace the second sentence in subparagraph A with the following (change underlined for emphasis):

The time allowed to complete the Work will be stated in the Bid Documents and/or Supplementary Conditions and will be known as the "Contract Time".

Add the following subparagraph E:

- E. The Work shall be substantially complete within 150 Calendar Days from the Notice to Proceed, unless further modified by approved Change Order. Final Completion including completion of all punch list Work shall occur within 30 days after the date of Substantial Completion.

108.08 LIQUIDATED DAMAGES

Add the following sentence to the end of paragraph B.:

Liquidated damages are set at \$150.00 per day and will be assessed for every Calendar Day past the date of Substantial Completion.

108.09 SUPERVISION

Add paragraphs C. through E.:

- C. The authorized representative shall be designated in writing, shall be from Contractor's own organization, experienced in the type of work to be performed under the Contract Documents, and capable of reading and thoroughly understanding the plans and specifications.
- D. Either the Contractor or the authorized representative shall be on-site at all times during construction.
- E. Failure to provide the supervision required by these provisions is sufficient cause for immediate termination of the contract, or other remedy the Owner may deem to be appropriate in accordance with the Contract Documents.

109.08 CHANGE ORDER REQUESTS AND COMMUNICATION REGARDING THE WORK

Replace the first sentence of paragraph C with (change underlined for emphasis):

- C. Upon receipt of a PR, the Contractor shall provide a Change Order Request form (COR) within 7 Calendar Days unless otherwise agreed upon by the Owner.

Insert new paragraphs E. and F.:

- E. In the absence of applicable unit prices or other agreement, the COR will be priced in accordance with the following provisions:

1. In no case shall the sum of the individual Markups applied to a General Contractor's modification exceed 15% of direct cost of the Work, regardless of the number of Subcontractor tiers involved in performing the Work.
 2. The total combined Mark-up for a Subcontractor and any lower-tier subcontractors or suppliers shall not exceed 10%.
 3. For work performed by a Subcontractor, the Subcontractor will receive 10% Markup for direct costs. The General Contractor shall receive 5% of the Subcontractor's direct costs.
 4. For self-performed work by the General Contractor, the Markup shall equal 15% of the direct costs.
- F. If the net value of a change results in a credit from the Contractor or Subcontractor, the credit shall be the actual direct cost, plus Markup in accordance with paragraph E. above. When both additions and credits covering related work or substitutions are involved in any one change, the net direct cost plus Markup shall be calculated in accordance with paragraph E above

Renumber existing paragraphs E. and F. as paragraphs G. and H.

109.19 PARTIAL OCCUPANCY OR USE

Replace subparagraph F.2 with:

2. Contractor shall notify Owner when the punch list work is complete and upon written agreement by the Owner that the punch list work is complete, Final Payment shall be made in accordance with Subsection 109.21.

109.20 PAYMENTS AND RETAINAGE

Replace paragraphs F. and G. as follows:

F. Mid-Month and Monthly Progress Payments.

1. Mid-Month Progress Payment. On the 15th of each month, or on the next work day, the Contractor shall submit a good faith estimate of the value of the work performed that was not included within the Contractor's previous progress payment, if any. The Owner may either approve the Contractor's estimate or prepare its own estimate of the work performed if the Contractor fails to prepare one on time or the Contractor's submission appears to be incorrect. Thereafter, Owner will make a mid-month progress payment based on the estimate as follows:
 - a. The mid-month payment is an advance on the monthly progress payment.

- b. The mid-month payment will be taken into account and deducted from any amount otherwise due the Contractor on the end of the month progress payment, or any subsequent advance payment or progress payment.
 - c. Because the payment is an advance not otherwise required by law, the Contractor agrees that the only dispute about the amount of the advance payment is whether the Owner prepared its own Estimate in good faith. The Contractor acknowledges the advance payment is simply a rough estimate made for the purpose of providing the Contractor and its subcontractors with funds in advance of the progress payment and is not intended to represent the exact amount owed.
 - d. The Owner may request additional documentation from the Contractor to verify any estimate submitted or may instead calculate the Owner's own estimate. If requested, Contractor shall provide documentation to establish its Estimate within three (3) working days. Failure to provide additional documentation when requested precludes any dispute about whether the amount of the Owner's estimate was calculated in good faith.
 - e. Owner has discretion not to make an advance payment if the amount of work performed by the 15th of any month is \$5,000 or less, or if there is a chance that the advance payment might exceed the remaining amounts due the Contractor under the Contract.
 - f. Because the mid-month payment is an advance on the monthly progress payment, no interest is due on the advance payment until the time when interest would be due under the progress payment.
 - g. Within 10 Calendar Days from the date that any payment is sent by Owner to Contractor, Contractor shall pay its Subcontractors for work performed during the period covered by the Application for Payment regardless if the Subcontractor agrees to some different schedule. The Contractor is required to take all necessary good faith actions to ensure that it makes payment to its Subcontractors. In the event of a dispute, the Contractor shall pay the portion not in dispute and timely resolve the amount that is in dispute.
 - h. Upon request from Owner, Contractor shall inform Owner's Representative of the portion of any advance payment owed to any of its Subcontractors. Nothing in this article requires the Contractor to pay its Subcontractors for any portion of the Work that is disputed or which otherwise would not be eligible for payment.
2. Monthly Progress Payment.
- a. In addition to the mid-month payment described above, the Contractor shall be paid a monthly progress payment. Contractor shall furnish Application for Payment for all work completed within the past month that is consistent with the Schedule of Values approved by the Owner and that accounts for the

mid-month pay estimate. In addition, the Contractor shall submit such documentation required by the Owner's Representative that substantiates its request for payment. Thereafter, the Contractor will be paid in accordance with the Application for Payment to the extent it is consistent with the Schedule of Values.

- b. The Application for Payment may include the value of Change Orders executed during the month.
- c. Where the Application for Payment is filled out incorrectly, or where there is any defect or impropriety in any submitted Application or when there is a good faith dispute, the Owner's Representative shall so notify the Contractor within 15 days stating the reason or reasons the Application is defective or improper or the reasons for the dispute. A defective or improper Application, if corrected by the Contractor within seven days of being notified by the Owner, shall not cause a payment to be made later than 30 days after receipt of the original Application from the Contractor or 15 days after the payment is approved by the Owner's Representative, whichever is the earlier date.
- d. The Application for Payment shall not request payment for work that the Contractor contends it does not owe to a Subcontractor or supplier.
- e. As a condition of payment, the Contractor shall furnish a conditional Release of Lien Waiver with each monthly progress payment and a final Release of Lien Waiver upon request of final payment on such forms as required by the Owner.

Renumber paragraphs H. through P. as paragraphs G. through O.

END OF SECTION

SECTION 01 1000

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Permits.
4. Access to site.
5. Coordination with occupants.
6. Work restrictions.

B. Related Requirements:

1. General Conditions of the Contract for Construction 'B'.
2. Document 00 7300 "Supplementary Conditions".
3. Section 01 5200 "Temporary Facilities" for temporary utilities and facilities or structures required to accommodate access or to facilitate construction work.
4. Section 01 5700 "Temporary Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: Restroom Facilities Electronic Locking Project

1. Project Location: Various Park Locations within the City of Portland.

B. Owner: City of Portland Parks and Recreation

1. Owner's Representative: Philip McCormick

C. Project Team: Personnel advising and assisting Owner's Representative, identified at Preconstruction Conference:

1. Portland Parks & Recreation Project Manager: Philip McCormick, PP&R
2. Architect: David Horsley, DAO Architecture LLC
3. Electrical Engineer: Mark O'Leary, Interface Engineering

- D. Personnel identified in 1.2.C are not Regulatory Inspectors.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
 - 1. Remove and replace restroom doors, frames, and hardware. The Work includes the installation of electric timers to automate door control and other Work indicated in the Contract Documents.

1.4 PERMITS

- A. Prepare materials for, submit, obtain and pay fees for all trade permits required to prosecute the Work.
- B. Assume permits for the Work previously obtained by Owner after Owner-Contractor agreement is signed.
 - 1. None.

1.5 ACCESS TO SITE

- A. Use of Site: Limit use of Project site to restroom facilities indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated. Maintain pedestrian and vehicular circulation routes.
- B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.6 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the Park during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner and public usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing pedestrian circulation, loading zones and exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other

occupied or used facilities without written permission from Owner and authorities having jurisdiction.

2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.7 WORK RESTRICTIONS

- A. Work restrictions, Restroom Construction / Closures. The maximum number of restrooms under construction concurrently shall be limited to four (4) restroom facilities.
- B. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- C. On-Site Work Hours: Limit work on project site to normal business working hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated.
 1. Weekend Hours: Obtain Owner approval.
- D. Restricted Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 2100

CONTINGENCY ALLOWANCE

PART 1 GENERAL

1.1 SUMMARY OF WORK

A. Section Includes:

1. Contingency Allowance

1.2 CONTINGENCY ALLOWANCE

A. Contingency Allowance Amount:

1. Include in the Contract Price a contingency allowance in the amount of \$20,000.

B. Expenditure of Contingency Allowance:

1. The Owner's Representative anticipates using the contingency allowance to pay for some or all extra cost changes in the Work.
2. Expenditures from the contingency allowance, if any, are authorized and valued as changes in the Work, as specified in the General Conditions of the Contract. The Owner's Representative determines which changes in the Work are paid for from the contingency allowance.

C. Expenditure of Contingency Allowance:

1. Upon completion of the Work, the Contract Price is adjusted by credit change order to provide for the difference, if any, between the total amount of the authorized expenditures from the contingency allowance and the original amount of the contingency allowance. The Contractor is not entitled to all or any part of the unexpended balance of the contingency allowance.

END OF SECTION

SECTION 01 2200

UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Bid Form
 - 2. Pertinent individual Specification Sections referenced in Unit Price Schedule below.

1.2 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Unit Price Bid Item 39: Temp Tree Protection Fencing.
 - 1. Description: Installation of 6-foot temporary chain link fence to protect existing trees. Fencing to be installed according to Section 01 5639 "Temporary Tree and Plant Protection."
 - 2. Unit of Measurement: Linear foot of temp fence installed.

END OF SECTION

SECTION 01 2300

ALTERNATES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Schedule of Alternates.
 - 2. Administrative procedures.
- B. Related Sections:
 - 1. Bid Form
 - 2. Contract for Construction.

1.2 SCHEDULE OF ALTERNATES

- A. Alternate No. 1 – Cathedral Park:
 - 1. Work Added: Cathedral Park Restroom
 - 2. Work Deleted: None
 - 3. Referenced Sections: All
- B. Alternate No. 2 – Kenton Park:
 - 1. Work Added: Kenton Park Restroom
 - 2. Work Deleted: None
 - 3. Referenced Sections: All
- C. Alternate No. 3 – Arbor Lodge Park:
 - 1. Work Added: Arbor Lodge Restroom
 - 2. Work Deleted: None
 - 3. Referenced Sections: All
- D. Alternate No. 4 – Irving Park:
 - 1. Work Added: Irving Park Restroom
 - 2. Work Deleted: None
 - 3. Referenced Sections: All
- E. Alternate No. 5 – Grant Park:
 - 1. Work Added: Grant Park Restroom
 - 2. Work Deleted: None
 - 3. Referenced Sections: All

1.3 ADMINISTRATIVE PROCEDURES

- A. Work Adjustments for Selected Alternates:
 - 1. Adjust work for each Alternate selected by Owner to achieve the desired result as indicated on Drawings and specified in related technical sections.
 - 2. Include changes in material, equipment, fabrication, erection, installation, and finishing.
- B. Contract Sum Adjustments for Selected Alternates:
 - 1. Owner will review and accept or reject any or all Alternates, based on order of alternates indicated in Bid Form, except rejection of Basic Bid constitutes rejection of all Alternates.
 - 2. Initial accepted Alternates will be identified in Owner-Contractor Agreement.
 - 3. Owner reserves the right to accept Alternate Bids at any time within 30 days after Contract Award.
 - 4. After the Contract is signed, Owner will adjust Contract Sum by Change Order by the amount indicated on Bid Form for each Alternate selected.
- C. Contractor's Requirements:
 - 1. Alternate Work is defined in this Section, detailed on Drawings where required for clarity, and specified in detail in work related Sections referenced in this Section.
 - 2. Minor adjustments to exposed finished surfaces, or concealed work by incorporation of selected Alternates may not be indicated on Drawings or specified in referenced work related Sections.
 - 3. Include adjustments in work as required to achieve the indicated result, consistent with requirements in Contract Documents.
 - 4. Coordinate work modified by incorporation of selected Alternates.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 2500

SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Requirements for Post-Award Substitution Requests.
2. Value Engineering Procedures.

B. Related Documents and Sections:

1. General Conditions of the Contract for Construction – ‘B’.
2. Section 01 3300, Submittal Procedures.
3. Section 01 6000, Product Requirements.
4. Form 01 6001, Post Award Substitution Request Form.

1.2 POST AWARD SUBSTITUTION REQUESTS

A. Procedures:

1. Prepare post award substitution requests on Form 01 6001, “Post Award Substitution Request”.
 - a. Substitution requests will not be accepted as part of a Request for Information or product Submittal.
 - b. Substitution requests will not be accepted from subcontractors, manufacturers or suppliers.
2. Submit a separate request for each product or system, supported with complete data, drawings, and samples as appropriate.
 - a. Product name, nomenclature, name of manufacturer, complete specification and descriptive data.
 - b. Statement of why the proposed substitution is equal or better, with supporting documentation.
 - c. Statement of all changes to contract documents necessary to incorporate substitution.
 - d. Statement of impact on other work and plan of implementation.

- e. Cost analysis, including statement of all costs required to incorporate substitution into project and changes to future maintenance or replacement costs of project.
 - 3. Incompletely documented substitution requests will be returned without consideration.
 - 4. Requests for approved Equal for a multiple list of mechanical and electrical components in one category of Work by one manufacturer may be listed on one Post Award Substitution Request Form, when acceptable to Owner.
 - 5. Owner may take up to 14 days to review each Substitution Request.
 - 6. Contract Time will not be extended to account for time necessary for Architect or Owner to review substitution requests.
- B. Evaluation of Substitution Requests:
- 1. Owner will consider accepting post award substitution requests only if proposed product is Equal or better than specified product and:
 - a. specified material, product, parts or equipment is unavailable; or
 - b. Contractor can demonstrate a reduction in Contract Time and/or Contract Sum that will result from substitution.
 - 2. Proof of equality rests with Contractor. Owner's decision on equality and on acceptance or rejection of proposed substitution is final.
- C. If, in opinion of Owner, proposed product meets requirements in Paragraph 1.5.B above, Owner may issue a:
- 1. Field Order where Contract Sum or Contract Time is not affected; or
 - 2. Construction Change Directive or Change Order where Contract Amount or Contract Time is affected.

1.3 VALUE ENGINEERING

- A. Owner will consider value engineering proposals after award of Contract that include a reduction in Contract Time or Contract Sum without changing project quality, schedule, performance or increasing future maintenance or replacement costs.
- B. Submit value engineering proposals to Owner using a completed Post Award Substitution Request Form (Form 01 6001).

1. Submit a separate request for each proposal, supported with complete data, drawings, and samples as appropriate.
 - a. Product name, nomenclature, name of manufacturer, complete specification and descriptive data.
 - b. Statement of all changes to contract documents necessary to incorporate substitution.
 - c. Statement of impact on other work and plan of implementation.
 - d. Cost analysis, including statement of all costs required to incorporate substitution into project and changes to future maintenance or replacement costs of project.
2. Incompletely documented value engineering proposals will be returned without consideration.
3. Contract Time will not be extended to account for time necessary for Architect or Owner to review substitution requests.
4. Acceptable value engineering proposals will be incorporated into Contract by appropriate contract change document depending on whether Contract Sum changes or not.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 2900

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Administrative and procedural requirements necessary to prepare the Schedule of Values.
 - 2. Administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 01 2100 "Contingency Allowance" for procedural requirements governing the handling and processing of Contingency Allowance.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the Schedule of Values with items in Contractor's construction schedule.
 - 2. Submit the draft Schedule of Values to Owner at the Preconstruction Conference. Approved Schedule of Values required before submittal of first Application for Payment.
- B. Format: Use Schedule of Values form provided by Owner.
- C. Approval: Owner will review and comment on draft Schedule of Values received at Preconstruction conference.
 - 1. Revise Schedule of Values according to Owner requirements. Owner reserves the right to reject any unbalanced values.
 - 2. Owner's opinion on acceptable Schedule of Values is final.
 - 3. Owner may establish final Schedule of Values in absence of agreement.
 - 4. Provide a breakdown of the Contract Sum in enough detail to facilitate evaluation of Applications for Payment and progress reports.
 - 5. Provide a separate line item in the Schedule of Values for the following items:

- a. Mobilization.
 - b. Demobilization and close-out activities.
 - c. Bonding and insurance.
 - d. Additive Alternates incorporated into Contract.
6. Contingency Allowances: Provide a separate line item in the schedule of values for this allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

1.3 APPLICATIONS FOR PAYMENT

- A. Application for Payment Forms: Use Application for Payment form provided by Owner.
1. Complete every entry on form.
 2. Deduct 5 percent retainage as required by the Contract.
 3. Execute certification of Application for Payment using signature of person authorized to sign legal documents on behalf of Contractor.
 4. Owner will return incomplete applications without action.
- B. Submit a payment itemization with line item identifications and values from approved Schedule of Values with each Application for Payment. Entries shall coordinate with data on Contractor's construction schedule. Use updated schedules if revisions were made.
1. For each new application, start a new column and add new lines for executed Change Orders and stored materials.
 - a. Identify each Change Order in the same manner as for the original unit of work.
 2. Indicate cumulative percentage complete for each unit of Work and for entire Project.
 3. Insert dollar amount in each column for each line item for the increment of Work performed and for stored materials.
 4. Pro-rate bond, insurance, profit and overhead amounts according to the overall percent complete of the entire Project.
- C. Stored Materials: Include in Application for Payment amounts applied for materials purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- D. Procedures for Submitting Applications for Payment:
1. Submit 3 copies of each Application for Payment to the Owner's Representative twice monthly.
 2. Submit each Application for Payment under transmittal letter specified in Section 01 3300 Submittal Procedures.
 3. Submit updated construction schedule with monthly Application for Payment.
- E. When Owner's Representative requires substantiating information, submit one copy of substantiating data with transmittal letter to justify dollar amounts in question, include a reference to payment application number, date, and line item by number and description.
- F. Application for Payment at Substantial Completion: After Owner issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- G. Application for Final Payment: Submit after all items of Work are completed and Closeout Submittals have been approved by Owner's Representative.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 3100

PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:

1. Coordination.
2. Cutting and patching.
3. Coordination of tests and inspections.
4. Utility Locates.

B. Related Requirements:

1. Section 01 3300: Submittal Procedures.
2. Section 01 7000: Execution and Closeout Requirements.

C. Submittals:

1. Cutting work plan.
2. Cutting installer qualifications.

1.2 COORDINATION

A. Coordination of Electrical:

1. Review electrical Drawings for possible conflicts prior to Work.
2. Coordinate pipe, conduit and equipment rough in and connection requirements.
3. Coordinate space requirements and provide adequate clearance and additional offsets and bends between electrical systems, conduit and equipment as necessary.
4. Utilize spaces efficiently to maximize accessibility for additional installation, maintenance, and repair of systems, fixtures, and equipment.
5. Verify that systems, fixtures, and equipment will fit in the spaces provided.
6. Resolve space conflicts with Owner's Representative prior to layout.

B. Coordination Electrical Work:

1. Review electrical Drawings for possible conflicts prior to rough-in Work.

2. Verify that characteristics of electrical equipment and fixtures are compatible with existing site and building utility systems.
 3. Coordinate duct, conduit, equipment, and fixture rough-in and connection requirements.
 4. Conceal pipes, ducts, and wiring within building assemblies in finished areas, except as otherwise indicated on Drawings.
 5. Install additional offsets and bends in electrical systems where required by site conditions.
 6. Coordinate space requirements and provide adequate clearance and additional offsets and bends for electrical systems, fixtures, and equipment.
 7. Utilize spaces efficiently to maximize accessibility for additional installation, maintenance, and repair of systems, fixtures, and equipment.
 8. Verify access routes through concealed spaces.
 9. Verify that systems, fixtures, and equipment will fit in the space provided.
 10. Resolve space conflicts with Owner's Representative prior to rough-in.
- C. Coordinate completion and cleaning of Work in areas designated for Owner occupancy prior to Substantial Completion of overall project.

1.3 CUTTING AND PATCHING

A. On Site Cutting Procedures:

1. Submit written work plan in advance of cutting which affects:
 - a. Structural integrity of a structural element.
 - b. Integrity of weather-exposed or moisture-resistant elements.
 - c. Visual qualities of exposed surfaces.
2. Employ original or skilled installer to perform cutting and patching.
3. Provide shoring, bracing, and support as required to maintain structural integrity of the building elements.
4. Perform cutting and product removal by methods which will minimize damage to other Work and will provide proper substrates to receive patching and finishing.
5. Differential settling, connection or surface tolerances resulting from disturbance of substrates in or near the patch will be corrected at no additional cost to Owner.

B. Cutting and Patching in the Right of Way:

1. According to City of Portland Bureau of Transportation standard specifications.

C. Correcting Defective Work:

1. Restore Work with new products in accordance with requirements of Contract Documents.
2. Maintain integrity and tolerances of substrates and adjacent construction.
3. Match adjacent finishes in color, texture, and sheen.
4. Refinish continuous surfaces to nearest intersection.

C. Cutting and Patching for Systems, Fixtures and Equipment:

1. Cut surfaces and building members to install systems, fixtures, equipment, utility lines, and sleeves.
2. Maintain integrity of floor, wall, and ceiling assemblies and fill voids to provide an air tight seal around penetrating items.
3. Do not penetrate spray applied fireproofing on steel members.

1.4 COORDINATION OF TESTS AND INSPECTIONS

- A. Where the Specifications require Work to be specifically tested or reviewed, do not test or cover up Work without test or review.
- B. Plan and coordinate schedule of all testing and inspections required by the Contract Documents.
1. Bear the cost of retesting or reinspection of Work that does not meet contract requirements. No additional Contract Time will be added.
 2. Bear the cost of repeat site visits by testing or inspection agencies caused by Contractor failure to plan ahead or provide reasonable notice to agencies. No additional Contract Time will be added.
- C. Provide timely written notice to Owner of readiness for inspection, unless the Owner waives such notice.
- D. Uncover for examination, at Contractor's expense, any Work covered up without such notice, approval or consent, if required by the Contract.
- E. Set up all necessary equipment and perform a preliminary test so that any and all defects may be discovered and repaired prior to calling the Owner out for the test.

1.5 UTILITY LOCATES

- A. Call in locate requests to Oregon Utility Notification Center 1-800-332-2344 at least 72 hours prior to scheduled work.
 - 1. After scheduling off-site locate, schedule on-site utility locates from Owner's utility locate coordinator at 503-823-1611.
 - 2. Provide ticket number received from Oregon Utility Notification Center.
 - 3. Coordinate on-site locate date soon enough after off-site locate date that off-site marks are still visible.
 - 4. Follow instructions from Owner utility locate coordinator for marking site in advance of locates and estimated clear time for digging.
- B. Allow sufficient time for both locates to be completed before Work is scheduled to begin.
 - 1. Allow at least 72 hours before work is scheduled to begin for on-site locates.
 - 2. No adjustments to Contract Time will be granted due to failure to coordinate scheduling of locates with project schedule.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01 3300

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Progress schedules.
 - 2. Product data.
 - 3. Shop drawings.
 - 4. Product samples.
 - 5. Design data.
 - 6. Manufacturer's instructions.
 - 7. Reference standards.
 - 8. Preferred subcontractor list.
 - 9. Site safety plan.
- B. Related Sections:
 - 1. General Conditions of the Contract for Construction – 'B'
 - 2. Section 01 4500, Quality Control: Test and inspection report submittals.
 - 3. Section 01 7000, Execution and Contract Closeout: Project record documents and closeout manual submittals.

1.2 SUBMITTALS

- A. Progress Schedules:
 - 1. Prepare and maintain a horizontal bar chart with separate line for each subcontract and each separate area of Work, identifying first work day of each week, including a complete sequence of construction activity, and identification of the critical sequence of activities.
 - 2. Indicate product submittal, purchase order, delivery, installation, and site testing and inspecting dates for Contractor furnished materials and equipment required for performance of the Work.
 - 3. Indicate dates for starting and finishing each phase of work.
 - 4. When updating, indicate actual and scheduled starting and finishing dates for each separate area of Work and revise location of bar graph to indicate the revised schedule.
 - 5. When updating, identify areas of Work modified since previous submittal.
 - 6. Maintain a copy of updated progress schedule at the site.

B. Product Data:

1. When product data is required by a unit of work Section in this Manual, submit manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other descriptive data on manufactured products and systems.
2. Identify data sheets with the Section and Paragraph numbers where the product or system is specified.
3. Submit product data sheets in preliminary closeout manual as specified in Section 01700, Contract Closeout.
4. Review of product data by Owner's Representative is for conformance with the design intent only.

C. Shop Drawings:

1. When shop drawings are required by a unit of work Section in this Manual, submit shop drawings showing shop assembly, field measurements, connections, details, dimensions, finishes, and fasteners.
2. Cross-reference shop drawings to drawing and detail numbers in Contract Documents.
3. Owner's Representative review of shop drawings is for conformance with the design intent only.
4. For Contractor designed structural systems, submit shop drawings bearing the seal and signature of a Structural Engineer registered in the State of Oregon.

D. Product Samples:

1. When product samples are required by a unit of work Section in this Manual, submit product samples of size specified and of sufficient size to clearly illustrate characteristics of product or system.
2. Identify product samples with the Section and paragraph numbers where the product is specified.
3. Submit all exterior color and texture samples at the same time, to allow for a coordinated review by Owner's Representative.
4. Submit all interior color and texture samples at the same time to allow for a coordinated review by Owner's Representative.
5. Review of product samples by Owner's Representative is only for finish appearance and conformance with the design intent.

E. Design Data:

1. When design data is required by a unit of work Section in this Manual, submit design drawings and structural calculations for equipment and systems designed by subcontractors.
2. Obtain approval of subcontractor designed equipment and systems by Local Building Officials prior to starting construction of subcontractor designed equipment and systems.

3. Submit design drawings and structural calculations bearing the seal and signature of a structural engineer registered in the State of Oregon.
- F. Manufacturer's Instructions:
 1. When products and systems are to be fabricated and installed at the site, submit manufacturer's fabrication and installation instructions for each product and system.
- G. Reference Standards:
 1. When site fabrication and installation is specified using a reference standard, the Contractor shall have on file at the site one copy of the current standard, prior to start of site fabrication and installation.

1.3 SUBMITTAL PROCESSING

- A. Contractor's Review:
 1. Review edit, date, and sign submittals prior to submitting to Owner's Representative.
 2. Verify that field measurements and field conditions effecting shop drawings have been reviewed.
 3. Verify that items proposed will work for its intended use.
 4. Include with each submittal, written notification to Owner's Representative, when submittal includes deviation from requirements of Contract Documents.
 5. Immediately incorporate required corrections in submittals and resubmit submittals for further review when requested by Owner's Representative.
- B. Owner's Representative Review:
 1. Owner's Representative will review submittals for conformance with information given and the design concept expressed in the Contract Documents.
 2. Contractor's responsibility for deviation in submittals from requirements of Contract Documents is not relieved by review of submittals by Owner's Representative, unless Owner's Representative gives written acceptance of specific deviations.

1.4 QUANTITY OF REQUIRED SUBMITTALS TO OWNER

- A. Progress Schedules, Progress Reports, Product Data, Shop Drawings, Design Data, Manufacturer's Instructions, Reference Standards, and Site Safety Plan:
 1. Submit one PDF submittal.
- B. Product Samples:

1. Comply with each unit of work Section covering specific products and systems for size and quantity of product samples required.
2. Where quantity and size is not specified, submit quantity and size required to clearly illustrate characteristics of products and systems.

1.5 SUBMITTAL TIME SCHEDULE

A. Contractors Submittal Schedule:

1. Progress Schedules: Submit Progress Schedules with each application for payment.
2. Product Data: Submit product data within 20 days after start of Work.
3. Shop Drawings: Submit shop drawings 10 days prior to fabrication or manufacture of each area of Work.
4. Product Samples: Submit product samples 10 days prior to ordering products.
5. Design Data: Submit design data 10 days prior to ordering systems and equipment.
6. Manufacturer's Instructions: Submit manufacturer's instructions 10 days prior to erection, installation, and application of products.
7. Reference Standards: Submit reference standards not less than 10 days prior to erection, fabrication, installation, and application of products.
8. Preferred Subcontractor List: Submit preferred subcontractor list with initial submittal of Schedule of Values.

B. Owner's Review Schedule:

1. Owner will review submittals and will return submittals to the Contractor within 14 days.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01 4200

REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the General Conditions of the Contract.
- B. "Approved": When used to convey Owner's action on Contractor's submittals, applications, and requests, "approved" is limited to Owner's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Owner. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Except to the extent more explicit or more stringent requirements are written directly into the contract documents or are required by governing regulations, applicable construction industry standards have the same

- force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference. In case of a conflict between the referenced standard and the project specifications, the project specifications shall govern.
- B. Referenced Standards: Industry standards which are referenced in the contract documents have precedence over non-referenced standards which are, nevertheless, seen to be intended by their producers for application to work similar to that required for this project.
 - C. Non-Referenced Standards: Industry standards which are not specifically referenced in the contract documents for applicability to the work, including standards produced by those associations and agencies listed in this section (but not referenced elsewhere), are applicable as a general measurement of whether the performed work complies with recognized standards of the construction industry.
 - D. Publication Dates: In each instance, comply with the standard or trade association publications which was in effect at the date of the contract documents, except where specifically indicated to comply with a publication of another date. References in the specifications have generally omitted the date indicator which frequently accompanies the identification number for the standards and publications indicated. Submit requests for approval of standards or publications of a different date. Substantial changes in the work which result from approval of standards or publications of a different date shall be processed as change orders in conjunction with such approval, at no change in price.
 - E. Copies of Standards: In connection with the requirements (specified elsewhere in the contract documents) that each entity performing the work be expert in the portion of work being performed, each such entity is hereby also required to be familiar with recognized industry standards applicable to that portion of work. In general, copies of applicable standards have not been bound with the contract documents. Where copies of standards are needed for proper performance of the work, the Contractor is required to obtain such copies directly from the publication source. Although certain copies needed for enforcement of the requirements may be specified as required submittals, the Owners Representative reserves the right to require the Contractor to submit copies of additional applicable standards as needed for enforcement of the requirements.

1.3 ABBREVIATIONS AND ACRONYMS

- A. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the organizations responsible for the standards and regulations in the following list. Names and website information is subject to change

ADA Dept. of Justice ADA Regulations
Dept. of Justice 2010 ADA Standards for Accessible Design
Accessibility Guidelines for Buildings and Facilities
Available from U. S. Access Board
www.access-board.gov

FS Federal Specification

Available from National Institute of Building Sciences
www.nibs.org

UFAS Uniform Federal Accessibility Standards
Available from Access Board
www.access-board.gov

AA	Aluminum Association, Inc. (The)	(703) 358-2960
	www.aluminum.org	

AAMA American Architectural Manufacturers Association (847) 303-5664
www.aamanet.org

ACI ACI International (248) 848-3700
(American Concrete Institute)

	www.aci-int.org	
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association (Now part of CPA)	
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
ALSC	American Lumber Standard Committee, Incorporated www.alsc.org	(301) 972-1700
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers	(800) 527-4723 (404) 636-8400

	www.ashrae.org	
ASME	ASME International (The American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (973) 882-1170
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWCI	AWCI International (Association of the Wall and Ceiling Industry International) www.awci.org	(703) 534-8300
AWI	Architectural Woodwork Institute www.awinet.org	(800) 449-8811 (571) 323-3636
AWPA	American Wood-Preservers' Association www.awpa.com	(334) 874-9800
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BICSI	BICSI www.bicsi.org	(800) 242-7405 (813) 979-1991
CCC	Carpet Cushion Council www.carpetcushion.org	(203) 637-1312
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200

CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CRI	Carpet & Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	CSA International (Formerly: IAS - International Approval Services) www.csa-international.org	(866) 797-4272 (416) 747-4000
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) www.cti.org	(281) 583-4087
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
FMG	FM Global (Formerly: FM - Factory Mutual System) www.fmgglobal.com	(401) 275-3000
FMRC	Factory Mutual Research (Now FMG)	
GA	Gypsum Association www.gypsum.org	(202) 289-5440
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Now GSI)	
GS	Green Seal www.greenseal.org	(202) 872-6400

GSI	Geosynthetic Institute www.geosynthetic-institute.org	(610) 522-8440
HI	Hydraulic Institute www.pumps.org	(888) 786-7744 (973) 267-9700
HI	Hydronics Institute www.gamanet.org	(908) 464-8200
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
ISO	International Organization for Standardization www.iso.ch Available from ANSI www.ansi.org	41 22 749 01 11 (202) 293-8020
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LMA	Laminating Materials Association (Now part of CPA)	

LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864 (804) 314-8955
MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org	(847) 480-9138
MFMA	Metal Framing Manufacturers Association www.metalframingmfg.org	(312) 644-6610
MH	Material Handling (Now MHIA)	
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America www.marble-institute.com	(440) 250-9222
MPI	Master Painters Institute www.paintinfo.com	(888) 674-8937
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405
NACE	NACE International (National Association of Corrosion Engineers International) www.nace.org	(800) 797-6623 (281) 228-6200
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900

NCPI	National Clay Pipe Institute www.ncpi.org	(262) 248-9094
NCTA	National Cable & Telecommunications Association www.ncta.com	(202) 775-3550
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	InterNational Electrical Testing Association www.netaworld.org	(888) 300-6382 (303) 697-8441
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-1776
NGA	National Glass Association www.glass.org	(866) 342-5642 (703) 442-4890
NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association) www.nofma.org	(901) 526-5016
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
ORMCA	National Ready Mixed Concrete Association	(888) 846-7622

	www.nrmca.org	(301) 587-1400
NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 673-6275 (734) 769-8010
NSSGA	National Stone, Sand & Gravel Association www.nssga.org	(800) 342-1415 (703) 525-8788
NWWDA	National Wood Window and Door Association (Now WDMA)	
PDCA	Painting & Decorating Contractors of America www.pdca.com	(800) 332-7322 (314) 514-7322
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
PGI	PVC Geomembrane Institute http://pgi-tp.ce.uiuc.edu	(217) 333-3929
RCSC	Research Council on Structural Connections www.boltcouncil.org	(800) 644-2400 (312) 670-2400
RFCI	Resilient Floor Covering Institute www.rfci.com	(301) 340-8580
RIS	Redwood Inspection Service www.calredwood.org	(888) 225-7339 (415) 382-0662
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SGCC	Safety Glazing Certification Council www.sgcc.org	(315) 646-2234
SIA	Security Industry Association www.siaonline.org	(703) 683-2075
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)	
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association	(703) 803-2980

	www.smacna.org	
SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331
SWRI	Sealant, Waterproofing, & Restoration Institute www.swrionline.org	(816) 472-7974
TCA	Tile Council of America, Inc. www.tileusa.com	(864) 646-8453
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TMS	The Masonry Society www.masonrysociety.org	(303) 939-9700
TPI	Truss Plate Institute, Inc. www.tpinst.org	(703) 683-1010
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USGBC	U.S. Green Building Council www.usgbc.org	(202) 828-7422
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com	(800) 223-2301 (847) 299-5200

WMMPA	Wood Moulding & Millwork Producers Association www.wmmpa.com	(800) 550-7889 (530) 661-9591
WSRCA	Western States Roofing Contractors Association www.wsrca.com	(800) 725-0333 (650) 570-5441
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

- C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

BOCA	BOCA International, Inc. (See ICC)	
IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICBO	International Conference of Building Officials (See ICC)	
ICBO ES	ICBO Evaluation Service, Inc. (See ICC-ES)	
ICC	International Code Council www.iccsafe.org	(888) 422-7233 (703) 931-4533
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543

- D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CPSC	Consumer Product Safety Commission www.cpsc.gov	(800) 638-2772 (301) 504-7923
------	----------------------------------------------------	----------------------------------

DOE	Department of Energy www.energy.gov	(202) 586-9220
EPA	Environmental Protection Agency www.epa.gov	(202) 272-0167
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478
OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742 (202) 693-1999
PBS	Public Building Service (See GSA)	
PHS	Office of Public Health and Science www.osophs.dhhs.gov/ophs	(202) 690-7694
SD	State Department www.state.gov	(202) 647-4000

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 5200

TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Storage buildings.
2. Vehicular access and parking.
3. Temporary utilities.
4. Temporary sanitary facilities.

B. Related Sections:

1. Section 01 5700, Temporary Controls, for sequencing requirements.
2. Section 01 7700, Closeout Procedures: Final cleaning and site restoration.

1.2 SUBMITTALS

- A. Diagram of material laydown areas and location of temporary sanitary facilities to scale.**

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 VEHICULAR ACCESS AND PARKING

1. Do not obstruct public streets, parking areas, pedestrian walks, exit passageways, and loading areas without permission from authorities having jurisdiction.
2. Use existing parking areas only as authorized by Owner.
3. Provide barricades, warning signs, flagmen, and other traffic regulators as required to maintain safe traffic patterns around site.

3.2 TEMPORARY UTILITIES

A. Temporary Utilities by Owner:

1. Contractor may use existing site service connections as available, including electrical power, water, heat and ventilation systems, after obtaining written approval from Owner.
2. Owner will pay for electricity and water used for Work.
3. Maintain, repair, and clean existing and new utility systems used during construction.

3.3 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain in neat and clean condition sanitary facilities for employees, subcontractors, Owner's Representatives and inspectors. Permit no public nuisances.
- B. For each restroom facility under construction, provide and maintain in neat and clean condition one (1) ADA accessible sanitary facility for the exclusive use of public.
- C. Pier Park, Restroom B: Provide and maintain in neat and clean condition two (2) additional sanitary facilities for the exclusive use of TriMet bus drivers. One of these facilities shall be ADA accessible.
- C. Establish regular daily collection of all sanitary and organic wastes.
- D. Dispose of all wastes and refuse from sanitary facilities or organic material wastes from any other source related to Contractor's operations off site in a manner satisfactory to Owner and in accordance with all laws and regulations pertaining thereto.

3.4 PROJECT COMPLETION

- A. Completely remove temporary facilities after Substantial Completion or as approved by Owner.

END OF SECTION

SECTION 01 5639

TEMPORARY TREE AND PLANT PROTECTION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Temporary protection of existing trees and plants to remain.

B. Related Sections:

1. Section 32 9010: Trees, Plants and Ground Covers, for mulch.

1.2 DEFINITIONS

- A. Certified Arborist:** Certified by The International Society of Arboriculture (ISA) and registered in State of Oregon.
- B. Certified Tree Worker:** ISA certification.
- C. Project Arborist:** Certified Arborist acting as an arboricultural consultant to oversee and perform Work of this Section and advise on avoiding impacts to trees.
- D. Root Protection Zone (RPZ):** Area surrounding a tree within which access or disturbance of roots is regulated or prohibited. RPZ of each tree within or near work limits is indicated on drawings.
- E. Tree Inspector:** A representative of City of Portland Urban Forestry Department charged with administering Urban Forestry Permit.
- F. Tree and Plant Protection Zone:** Area of no disturbance as indicated or as deemed necessary by Project Arborist or Tree Inspector. Protection Zone may fall outside work limits.
- G. Tree Plan:** A site plan showing trees to be removed or preserved and protected.
- H. Urban Forestry Permit:** A permit, separate from building or public works permit, governing work on trees or within RPZ of trees.

1.3 REFERENCE STANDARDS

A. American National Standards Institute (ANSI):

1. A300, Tree, Shrub and Other Woody Plant Management – Standard Practices:
 - a. Part 1 Pruning
 - b. Part 5, Management of Trees and Shrubs During Construction

1.4 PERFORMANCE REQUIREMENTS

- A. Avoid construction impacts to trees and plants.
- B. Use experienced Certified Arborist and Certified Tree Workers to perform any work on trees and plants to remain, including their roots.
- C. Provide and maintain temporary fencing to protect trees and plants from damage.
 1. Location of fencing may be extended or changed as deemed necessary by Tree Inspector or Project Arborist.
- D. Prevent ground disturbance, stockpiling, material storage, vehicle parking or driving within tree protection fences.

1.5 QUALITY ASSURANCE

- A. Project Arborist Qualifications: An experienced arborist who has at least 5 years of consistent experience pruning large trees, and is accredited as defined in Article 1.2 "Definitions."
 1. Employees of Project Arborist in Work of this Section: Certified Tree Workers.
- B. Regulatory Requirements: Meet City of Portland Title 11 requirements for protection of existing trees and vegetation.
- C. Pre-Installation Meeting: As specified. Conduct meeting, including Project Arborist and Owner, on site.

1.6 SCHEDULING

- A. Notify Owner 48 hours prior to start of construction work that is to occur on or in vicinity of protected trees and plants.
- B. Obtain required Urban Forestry Permit inspections.
 - 1. Allow Tree Inspector 24 hours to respond to inspection requests.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Fencing: Continuous galvanized metal mesh fencing with driven steel posts as indicated spaced a maximum of 6 feet on center. If field conditions are shown to render specified fencing impracticable, Tree Inspector may approve alternative fencing upon request from Project Arborist:
 - 1. Portable galvanized metal mesh fence panels 6 feet high by 8 feet wide with steel panel stand bases.
 - 2. Continuous rolled orange plastic mesh fencing 4 feet high attached with zip-ties to 6 foot driven metal t-posts spaced a maximum of 6 feet on center.
- B. Pruning Equipment:
 - 1. Roots and Branches Larger than 1 inch in diameter: Sharp saw.
 - 2. Roots and Branches 1 inch or less in diameter: Pruning shears.
- C. Tree Root Protection Zone Signage: Yellow paper, black text, laminated, affixed to tree protection fencing with zip or twist ties. Sign template can be downloaded from: <https://www.portlandoregon.gov/trees/article/534674>

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine site to locate Tree Plan elements and verify that site construction fence are located correctly as indicated and relative to trees to be protected.

3.2 PREPARATION

- A. Conduct Preinstallation Meeting to verify:

1. Preconstruction tree protection measures required by Urban Forestry Permit.
2. Location of tree protection fencing. Tree Inspector may require Contractor to make minor adjustments in location of tree protection fencing at no additional cost to Owner.

3.3 PROTECTION, GENERAL

- A. Perform tree and shrub protection according to ANSI A300 Part 5, Management of Trees and Shrubs During Construction.
- B. Erect and maintain temporary tree protection fencing around RPZs and Tree and Plant Protection Zones before placing temporary facilities or starting Work.
 1. Install fencing in locations indicated, flush with initial finished grade, with protection zone signage in a prominent location on each fence. Maintain signage until fencing is removed.
 2. Once erected, maintain tree protection fencing through duration of work. Prohibit ingress, removal or modifications of tree protection fencing without prior approval from Urban Forestry.
 3. Do not store construction equipment, material, debris, or excavated material within fenced area.
 4. Do not permit vehicles, equipment or foot traffic within fenced area.
 5. Maintain fenced area free of weeds and trash.
 6. Remove fencing after final inspection or with prior written approval of Owner.
- C. Protect all plant growth including root systems of trees and plants from the following:
 1. Dumping of construction related refuse.
 2. Chemically injurious materials and liquids used in construction process.
 3. Noxious materials in solution caused by run-off and spillage during mixing and placement of construction materials and drainage from stored materials.
- D. Protect root zones from flooding, erosion, excessive wetting and drying, or continual puddling resulting from de-watering and other operations.
- E. Protect all existing plant material to remain against unnecessary cutting, breaking and skinning of roots and branches, and skinning or bruising of bark.

- F. Do not allow fires under and adjacent to trees or other plants.

3.3 COMPENSATION FOR TREES DAMAGED BY CONSTRUCTION

- A. In the event that any tree or trees indicated to remain are damaged, destroyed, or removed as a result of Work, Contractor is solely responsible and liable for fines, penalties and mitigation requirements administered by Tree Inspector according to City code.
 - 1. Immediately report damage, destruction or removal to Owner and Tree Inspector.
 - 2. Remove and mitigate at no cost to Owner damaged trees no longer suitable for retention if required by Tree Inspector.
 - 3. Owner reserves the exclusive right to withhold or deduct any fines, penalties or mitigation requirement costs from Retainage.
- B. Any wound or damage by construction activities to an existing tree constitutes partial injury. These include, but are not limited to:
 - 1. Any bark or tissue damage.
 - 2. Unauthorized cutting, breaking or removing tree branches or roots.
 - 3. Unauthorized ingress, cutting or damaging protected root zones.
 - 4. Soil compaction.
 - 5. Toxic run-off into tree preservation areas.
 - 6. Unauthorized discharge of materials into RPZ or tree protection zone.
- C. Partial injury will be estimated by Tree Inspector.
 - 1. Damages will be assessed according to City code.
 - 2. Damages may also include cost for loss appraisal by Owner plus the cost for necessary damage repair, at discretion of Owner.

END OF SECTION

SECTION 01 5700

TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Controls Installation Sequence
2. Work Site Staging, Security and Safety
3. Lead Based Paint Handling and Disposal
4. Construction Cleaning
5. Air Pollution Control
6. Noise Control
7. Chemicals

B. Related Sections:

1. Section 01 5200: Temporary Facilities, for temporary facilities.
2. Section 01 7419: Construction Waste and Disposal, for recycling requirements.

1.2 SUBMITTALS

- A.** Site Specific Health & Safety Plan (SSHSP): denoting all worker and site protection measures.
- B.** Site Staging, Security and Fencing Plan: denoting any material laydown, vehicle parking, fencing, gates and security measures to be deployed at the site.
- C.** Lead Paint Handling and Disposal Plan: approved by Authorities Having Jurisdiction.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CONTROLS INSTALLATION SEQUENCE

- A. Submit required Plans set forth in Section 1.2 above after Notice to Proceed and Preconstruction Meeting.
- B. Upon Owner approval of the required Plans, establish control over work site perimeter first.

3.2 WORK SITE STAGING, SECURITY AND SAFETY

- . Upon approval of plan, place fencing to secure work zone and keep pedestrian traffic out of the site. If required, isolate work while allowing for pedestrian through traffic.
 - 1. Do not commence work until security apparatus is in place.
 - 2. Maintain security apparatus until final acceptance unless otherwise indicated by Owner.
 - 3. Do not block rights of way with security apparatus without approval from City of Portland Bureau of Transportation.
 - 4. Obtain any required Sidewalk Closure, Parking Closure and/or Street Closure Permits from City of Portland Bureau of Transportation. Provide signage, traffic, pedestrian and bicycle control measures as required.
- B. Install signage informing pedestrians of work and dates of impact to pedestrian access.
- C. Install temporary safety guardrails, fencing, enclosures and perform all necessary safety measures in accordance with the SSHSP.

3.3 CONSTRUCTION CLEANING

- . Maintain site and other areas affected by Contractor's activities in neat and clean condition, free from accumulation of rubbish or waste material.
 - A. Recycle or dispose of all rubbish and waste material of any nature occurring at the work site, and establish regular intervals of collection and disposal.
 - B. Keep haul roads and circulation routes free from dirt, rubbish and unnecessary obstructions resulting from performing the Work.
 - C. Recycling and waste material storage shall be confined to areas approved by the Owner's Representative.
 - D. Dispose of all rubbish and surplus materials off the site of construction according to requirements specified in Section 01 7419 "Construction Waste Management and Disposal".

F. Interior Cleanliness:

- a. Install floor protection on top of existing floor surfaces indicated to remain.
- b. Broom clean stairs and elevators used for construction at end of each day and as needed.

3.4 AIR POLLUTION CONTROL

- A. Do not discharge smoke, dust, vehicle emissions or other contaminants into the atmosphere in violation of the regulations of any legally constituted authority.
- B. Prevent dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity.
 1. Carry out effective dust control measures wherever and as often as necessary to prevent work operation from producing dust.
 2. Furnish all labor, equipment, and means necessary to control dust.
- C. Be responsible for damage and dust abatement necessary resulting from dust originating from these operations.
- D. Continue dust control and abatement measures until relieved of further responsibility in writing by Owner.
- E. Comply with City of Portland Diesel Emissions and Idling Requirements policy.

3.5 NOISE CONTROL

- A. Prevent noise disturbance to adjoining property owners and the public.
- B. Comply with City of Portland Construction Noise Regulations, available here: <https://www.portlandoregon.gov/citycode/?c=28182>. Noise regulations include but are not limited to:
 1. Keep all equipment in good repair and muffled.
 2. Permissible work hours are 8 a.m. to 5 p.m. Monday through Saturday. Hours include equipment start or 'warm-up' time.
 3. Maximum noise level is 85 A-weighted decibels (dBa) measured at 50 ft.
 4. Certain equipment is exempt from noise level.

- C. Contractor may request from Owner's authorization to apply to the City for a Noise Variance. If Noise Variance is granted, pay the required fee at no extra cost to Owner.
- D. Inform Owner 24 hours in advance of anticipated high levels of noise disturbance, including type of equipment involved and likely duration of work.

3.6 CHEMICALS

- A. Provide on-site Safety Data Sheets (SDS) required by OSHA CFR 29 1910-1200 for all chemicals used on the project. Keep SDS readily accessible in case of incident or emergency and available to Owner's Representative.
- B. Upon request by Owner or regulatory authority, show approval by either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture of all chemicals proposed for use during project construction or furnished for project operation.
- C. Use all chemicals and dispose of all chemical residues in strict accordance with the printed instructions of the manufacturer.

3.7 WATER COURSES

- A. Do not obstruct the flow of water in gutters, sewers, drains or water courses. Provide for the free passage of surface water.
- B. Restore water courses intercepted or disturbed during the progress of the work to as good or better condition than found or make final provisions for them as satisfactory to the Owner.
- B. Manage, contain and dispose of all surplus water, mud, silt, or other runoff pumped from excavations or resulting from sluicing or other operations pursuant to City of Portland Source Control requirements, including but not limited to special dewatering, sampling or disposal procedures.
- D. Perform work adjacent to or in the vicinity of streams, lakes, or such other water courses in accordance with the requirements of the Authorities Having Jurisdiction.

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Product selection and options.
2. Manufacturer's fabrication instructions.
3. Delivering, storing, handling and protecting.
4. Examination before installation.
5. Manufacturer's instructions.

B. Related Documents and Sections:

1. Form 00 4325, Pre Award Substitution Request Form.
2. Section 01 2500, Substitution Procedures.
3. Section 01 3300, Submittal Procedures.

1.2 SUBMITTALS

A. Manufacturers' Information:

1. Storage, handling and protection instructions.
2. Manufacturer's fabrication instructions.
3. Manufacturer's installation instructions.

B. Certifications and conformance documentation as specified.

1.3 PRODUCT SELECTION AND OPTIONS

A. Product Selection:

1. Comply with specified industry standards.
2. Provide materials in size, type, and quality indicated and specified, unless variations are accepted by Owner according to Substitution Request procedure specified in Section 01 2500 "Substitution Procedures".
3. Provide equipment with capacities, sizes, and performance ratings indicated and specified, unless variations are accepted by Owner according to

Substitution Request procedure specified in Section 01 2500 "Substitution Procedures".

4. Two or more items of same kind shall be identical and by same manufacturer.
5. Unless indicated otherwise, products shall be new and of current manufacture.
6. Specifying a manufacturer and manufactured product shall not constitute a waiver of any Contract requirements, and products furnished by listed manufacturer shall conform to such requirements.

B. Product Options

1. For products specified only by reference standard, select any product meeting that standard.
2. For products specified by naming one or more products or manufacturers, request approval for any product or manufacturer not specifically named.
 - a. Use Form 00 4325 "Pre Award Substitution Form" until contract execution.
 - b. Refer to Section 01 2500 "Substitution Procedures" for procedures and requirements for substitution requests.

1.4 MANUFACTURER'S FABRICATION INSTRUCTIONS

- A. Fabricate products, materials, systems, and equipment in accordance with manufacturer's printed instructions.
- B. Obtain and distribute copies of manufacturer's printed fabrication instructions to parties involved in construction. Submit copy to Owner.
- C. Review and resolve conflicts between manufacturer's instructions and Contract Documents with Owner prior to fabrication of products, systems, and equipment.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 DELIVERING, STORING, HANDLING, AND PROTECTING

- A. Packing, Shipping, Handling, and Unloading:

1. Pack and ship material and equipment in undamaged condition, in manufacturer's original packaging, and with identifying labels attached.
2. Provide equipment and personnel to handle material and equipment by methods which will prevent damage to exposed surfaces.

B. Acceptance at Site:

1. Immediately after site acceptance and uncrating of material and equipment, inspect shipments to assure compliance with requirements of Contract Documents and record freight damage to material and equipment.
2. Record shortages, damaged and defective items. Submit plan of action for rectifying shortages, damaged or defective items.

C. Storing and Protecting:

1. Maintain temperature and humidity in storage areas within ranges required by manufacturer's instructions.
2. Store fabricated material and equipment above grade.
3. Cover material and equipment with vapor retarding coverings and provide ventilation as recommended by manufacturer.
4. Provide temporary coverings to protect installed material and equipment from damage resulting from subsequent construction activity.
5. Remove temporary coverings when no longer needed.

3.2 EXAMINATION BEFORE INSTALLATION

A. Acceptance of Surfaces and Conditions:

1. Examine areas, conditions and substrates to which material, products, equipment, and systems are to be fabricated, assembled, erected, installed, and applied for compliance with installation tolerances and other conditions affecting performance of products specified in this Section.
2. Do not proceed with installation until unsatisfactory conditions have been corrected.
3. Starting work will be construed as acceptance of existing surfaces and conditions within any particular work area.

3.3 MANUFACTURERS' INSTRUCTIONS

- A. Perform work in accordance with manufacturers' printed installation and application instructions.

- B. Handle, store, assemble, erect, install, connect, apply, clean, condition, adjust, lubricate, polish, and protect products, systems, and equipment as recommended by manufacturer.

END OF SECTION

SECTION 01 6001

POST AWARD SUBSTITUTION REQUEST FORM

ORIGINAL TO: Philip McCormick, Owner's Representative (Owner)
1120 SW Fifth Avenue Room 1302
Portland, Or. 97204-1933

PROJECT: Electronic Locking Project

According to the requirements of Section 01 2500 "Substitution Procedures", we hereby submit for your consideration the product described below as a substitution for the specified product indicated.

1. Specified Product:

Name: _____

Section: _____

2. Proposed Product:

a. Brand Name: _____

b. Model/Catalog No.: _____

c. Manufacturer: _____
(Name)

(Address) (Zip) (Telephone)

d. Distributor: _____
(Name)

(Address) (Zip) (Telephone)

e. Proposed product meets the following standards:

ANSI _____ F.S. _____ ASTM _____

Others _____

and is superior to the above in the following ways: _____

f. Proposed product will require the following changes in the Work:

1) Space Requirements: _____

2) Dimensions on Drawings: _____

3) Adjacent Work: _____

4) Installation Procedures: _____

g. Proposed product differs from specified product in the following way: _____

h. Product with result in a reduction of Contract sum totaling \$ _____
and/or reduction of Contract time totaling _____ days.

3. Reason for Substitution: _____

4. Supporting Data: The following laboratory tests, performance and test data, certifications, guarantees/warranties, and other supporting technical data are attached:

5. Guarantees: Manufacturers' guarantees of the proposed and specified items are:

[] SAME [] DIFFERENT (explain on separate sheet)

6. Certification: The undersigned certifies that the proposed product is equal or superior in all respects to the product specified.

7. Submitted By:

Firm: _____
(Name) (Telephone)

(Address) (Zip) (FAX)

By: _____ Title _____
(Please Type or Print)

Signature: _____ Date: _____

8. Owner:

☐ Accepted

☐ Accepted as noted

☐ Not Accepted

By: _____ Date _____

Remarks: _____

END OF FORM

SECTION 01 7300

EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Installation of the Work.
 - 2. Cutting and patching.
 - 3. Progress cleaning.
 - 4. Starting and adjusting.
 - 5. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 01 1000 "Summary" for limits on use of Project site.
 - 2. Section 01 3300 "Submittal Procedures" for submitting surveys.
 - 3. Section 01 7700 "Closeout Procedures" for recording of Owner-accepted deviations from indicated lines and levels ("as built"), replacing defective work, final cleaning and site restoration.
 - 4. Section 02 4119 "Selective Demolition" for demolition and removal of selected portions of the building.

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction or existing improvements necessary to permit review of work, or installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work, or to remove and replace work not conforming to requirements of Contract Documents.

1.3 PREINSTALLATION MEETINGS

- A. Cutting and Patching Conference: Conduct conference at Project site.
 - 1. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:

- a. Contractor's superintendent.
 - b. Trade supervisor responsible for cutting operations.
 - c. Trade supervisor(s) responsible for patching of each type of substrate.
 - d. Electrical subcontractors' supervisors, to the extent each trade is affecting by cutting and patching operations.
2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data:

1. For cutting and patching installer or fabricator.

B. Cutting and Patching Plan: Submit written plan describing procedures at least 7 days prior to the time cutting and patching will be performed. Include the following information:

1. Effect on Building or Park Operations: Staging and work areas; access, egress or circulation changes; interruptions or changes to building or park uses.
2. Changes to In-Place Construction: Describe anticipated process and results. Include changes to structural elements and operating components; weather-exposed or moisture-resistant elements or systems; as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work. Describe efficiency, operational life, safety and maintenance of systems, equipment or products involved.
4. Dates: Indicate dates, times and durations of cutting and patching work.
5. Electrical or Communication Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

C. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Cutting and Patching: Installer or fabricator qualified according to original specification for the Work.

- a. Weather-exposed or moisture-resistant elements and finished surfaces exposed to view: Original installer or fabricator, or installer or fabricator with at least 5 years of specialized experience in the type of work to be cut and patched.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. General: Provide finished installation complying with specified products, functions, tolerances and finished. Perform work in accordance with requirements indicated.
 2. Structural Elements: When cutting and patching structural elements, notify Owner of locations and details of cutting and await directions from Owner before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
 3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Owner's opinion, reduce the building's aesthetic qualities.
 4. Remove and replace construction that has been cut and patched in a structurally, operationally or visually unsatisfactory manner.
- C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
 1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.
- B. In-Place Materials: Use materials for patching identical to or better than in-place materials in terms of performance, function and aesthetics. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible. Comply with standards and specifications for each product involved.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Owner for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 1. Examine roughing-in for electrical and communications systems to verify actual locations of connections before equipment and fixture installation.
 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Owner according to requirements in Section 01 3100 "Project Management and Coordination."

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Owner.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, obtain spacing from Owner. Fit exposed connections together to form hairline joints.
- J. Repair or remove and replace damaged, defective, or nonconforming Work.
 - 1. Comply with Section 01 7700 "Closeout Procedures" for repairing or removing and replacing defective Work.

3.4 CUTTING AND PATCHING

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction or improvements to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
 - 2. Examine existing conditions in vicinity of cutting and patching work, identifying adjacent or connected elements subject to damage or movement. Provide devices and use methods to protect other portions of building or site from damage.
 - 3. Keep Owner informed of progress. Should conditions of Work or schedule necessitate change from approved Cutting and Patching Plan, request clarification in advance using (Request for Information) RFI process.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction and improvements during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 1000 "Summary."
- F. Existing Utility Services and Mechanical/Electrical/Communication Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Mechanical, Electrical and Communication Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - a. Maintain integrity of floor, wall and ceiling assemblies and fill voids to provide air tight seal around penetrating items.
 - b. Do not penetrate spray-applied fireproofing on steel members.
 5. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction or to nearest intersection in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 - c. For an assembly, refinish entire unit to provide an even finish.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and

appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

- a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces. Clean concealed piping or conduit and similar features before covering, painting or other final finish is applied.

3.5 PROGRESS CLEANING

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

2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 7419 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.
 1. Adjust and lubricate operable components to ensure operability without damaging effects.
 2. Water and maintain new plantings as indicated to ensure establishment.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION

SECTION 01 7419

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.1 SUMMARY OF WORK

A. Section Includes:

1. Construction recycling plan.
2. Management of construction waste.

B. Related Sections:

1. Section 01 5700: Temporary Controls, for construction cleaning.
2. Section 02 4119: Selective Demolition, for site demolition requirements.

1.2 PERFORMANCE REQUIREMENTS

- A.** Reuse or recycle construction waste generated during construction to greatest extent practical, possible and cost effective.
- B.** Dispose of construction waste that cannot be reused or recycled in environmentally sensitive manner as defined or approved by Owner.
- C.** Minimize factors that contribute to waste, such as over packing, improper storage, ordering error, poor planning, breakage, mishandling, and contamination.

1.3 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies:

1. Perform construction waste management work in accordance with applicable rules, regulations, codes and ordinances of local, state and Federal authorities.
2. Follow regulations of all jurisdictions and permits regarding removal and disposal of any hazardous substances identified in building or in salvaged building materials.
3. Obtain and pay for necessary permits, licenses and certificates and give notices as required.

1.4 SUBMITTALS

- A. Completed Construction and Demolition Debris Management Form.
- B. Report on a monthly basis to Owner:
 - 1. Types of waste materials produced as a result of work performed on site.
 - 2. Quantities of waste and recyclable materials taken from site.
 - 3. Destination of materials taken from site.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CONSTRUCTION RECYCLING PLAN

- A. Prepare and submit a construction recycling plan using Construction and Demolition Debris Management Form downloaded from City of Portland website at:
<https://www.portlandoregon.gov/bps/article/401238>.

3.2 ON-SITE MATERIAL SORTING AND STORAGE DURING CONSTRUCTION

- A. Each recycling facility or waste processor has requirements as to how materials they accept must be prepared and to what degree materials can be contaminated. In most cases, materials will need to be source-separated at job site.
 - 1. A comprehensive list of recycling processors and facilities in Portland metropolitan area is available from local building permit office or by contacting Metro at (503) 234-3000.
- B. Coordinate with local haulers to provide separate on-site containers for the following materials according to waste processor requirements:
 - 1. Wood: clean dimensional wood, palette wood.
 - 2. Plywood, oriented strand board, and particle board.
 - 3. Metals from banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
 - 4. Cardboard, paper, packaging.
 - 5. Masonry, concrete, asphaltic concrete and stone rubble.
 - 6. Glass.

7. Plastics.
 8. Beverage containers.
 9. Cardboard, paper, packaging.
 10. Paint.
 11. Rigid foam.
- C. Recycle waste types listed above, and follow source separation requirements for each using appropriate on-site container for each type.
1. Provide a separate container for non-recyclable materials.
 2. Clearly mark containers to avoid co-mingling of materials. Protect materials to be recycled from contamination from other materials, off-site sources or weather.
- D. Keep recycling and waste bin areas neat and clean.
- E. Inform field personnel and subcontractors about recycling requirements. Continuously monitor operations to verify proper source separation and to avoid contamination.
- F. Handle, store and transport recycled and waste materials in a manner that meets requirements set by designated facilities for acceptance.
- G. Contractor owns rebates, if any, paid or credited by hauler or recycler.

END OF SECTION

SECTION 01 7700

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Closeout submittals.
2. Project record documents.
3. Final adjusting and cleaning.
4. Site restoration.

B. Related Sections:

1. Section 01 5200: Temporary Facilities, for removal of temporary facilities.

1.2 CLOSEOUT SUBMITTALS

A. Submit Certificates of Inspection to the Owner's Representative with Notice of Substantial Completion of Work.

B. Project Record Documents:

1. Submit 1 copy of Project Record Documents for review after final inspection of punch list work.
2. Owner's Representative will return the preliminary copy of Project Record Documents with comments and required clarifications noted.
3. Submit final Project Record Documents to Owner's Representative with Certificate of Completion.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 PROJECT RECORD DOCUMENTS

A. Filing Procedures:

1. Maintain and file one copy of project manual, contract drawings, Addenda, Supplemental Instructions, Construction Change Directives, Change Orders and other Project Record Documents at the site according to the provisions of Paragraph 105.18 of the General Conditions.
 - a. Maintain Project Record Documents separately from documents used for construction.
2. Maintain and file one copy of all submittals, including but not limited to product data, shop drawings, product samples, design data, test reports, certificates, manufacturer's instructions, field reports, operation and maintenance data, warranties, guarantees, and permits at the site.
3. Owner will furnish one electronic (PDF) set of contract drawings and project manual for development of Project Record Documents.

B. Recording Procedures

1. Concurrent with construction progress, legibly mark and record information on the Project Record Document drawings and specifications.
 - a. Record changes from contract modifications and approved submittals.
 - b. Record actual products installed, including manufacturer's name, model name, model number, product options selected, and colors and finishes selected.
 - c. Record a description of actual work installed and field finishes applied, including the exact orientation of products, equipment or installations with a specific orientation indicated.
 - e. Record measured horizontal and vertical locations of utility systems in relation to permanent surface improvements.
 - f. Record changes of dimension, changes of detail, materials furnished, and details not on original Contract Drawings in a neat, clean and legible manner.

C. Record Drawings

1. Neat, clean, scaled paper Record Drawings of the completed improvements will be acceptable.

2. If color-coded linework is utilized in the preparation of contract or Project Record Documents, provide Project Record Documents in color.

3.3 INSTRUCTIONS FOR OPERATION AND MAINTENANCE

- A. Prior to submitting Notice of Substantial Completion, instruct Owner's personnel on operation and maintenance of the Work.

1. Fully instruct Owner's maintenance personnel in the operation, adjustment, and maintenance of equipment, systems, assemblies and finishes.

3.4 FINAL ADJUSTING AND CLEANING

- A. Final Adjusting of Operating Products:

1. Adjust operating products, equipment, and systems for smooth, efficient, and quiet operation.
2. Adjust site furnishings to be plumb and stable and or according to manufacturer's instructions.
3. Perform adjustments prior to submitting Notice of Substantial Completion.

- B. Final Cleaning of Interior Exposed Surfaces:

1. Execute final cleaning prior to final inspection.
2. Remove grease, dust, dirt, stains, manufacturer's labels, and fingerprints, from exposed surfaces.
3. Vacuum clean interior carpet, wood, fiber, and fabric surfaces.
4. Vacuum and mop wash interior concrete, resilient floor covering, and tile surfaces.
5. Wash and wipe dry interior glass, polyester and acrylic resin, laminated plastic, and mirror glass surfaces.

- C. Final Cleaning of Equipment and Systems:

1. Vacuum clean heating, ventilating, and cooling ducts, blowers, coils, fixtures, equipment, piping, grilles the interiors of electrical equipment cabinets.
2. Replace disposable air filters and vacuum clean permanent filters.
3. Flush water systems and disinfect domestic water lines.
4. Sanitize plumbing fixtures and equipment.
5. Clean light fixture reflectors, louvers, and lenses.

- D. Final Cleaning of Exterior Surfaces:

1. Remove debris from roofs, gutters, scuppers, downspouts, and drain sumps.
2. Wash clean drain sumps, fences, siding, walls, columns, trim, railings and sheet metal and site furnishings.
3. Broom clean asphaltic concrete, portland cement concrete, stone, brick, and paver surfaces.
4. Rake clean exterior landscape areas.
5. Remove waste and surplus material from the site.
6. Remove temporary facilities and controls as required in Sections 01 5200 and 01 5700.

3.5 SITE RESTORATION

1. After Substantial Completion, restore work sites and staging, hauling and storage areas to substantially their original condition.
2. Leave site in a clean and neat condition free of rubbish or excess material of any kind.

END OF SECTION

SECTION 02 4119

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure, and affected or adjacent site elements, where new construction is to connect to the remainder.
2. Salvage of existing items to be reused or recycled. (Note also 3.4.C below regarding salvage of existing hardware items removed.)

B. Related Requirements:

1. Section 01 1000 "Summary of Work" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.

1.2 DEFINITIONS

- A. Remove:** Detach items from existing construction or site and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage:** Detach items to be salvaged (if any, per direction of Owner) from existing construction or site, in a manner to prevent damage, and store and then deliver to Owner ready for reuse.
- C. Remove and Reinstall:** Detach items from existing construction or site, in a manner to prevent damage, prepare for reuse, and reinstall where indicated. Protect existing signage, or remove and reinstall as directed by Owner.
- D. Existing to Remain:** Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle:** To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.3 MATERIALS OWNERSHIP

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

- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.4 PREDEMOLITION MEETING

- A. Predemolition Conference: Conduct conference at project site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with the following:
 - 1. EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of Authorities Having Jurisdiction.
 - 2. ANSI A10.6 "Safety & Health Program Requirements for Demolition Operations."
 - 3. NFPA 241: "Safeguarding Construction, Alteration, and Demolition Operations."
 - 4. Applicable local codes for demolition work, safety of structure, and dust control.

1.6 FIELD CONDITIONS

- A. Conduct selective demolition so Owner's operations will not be disrupted.
 - 1. Within overall construction schedule, indicate the following:
 - a. Dates and duration that utility services will be interrupted.
 - b. Coordination for shutoff, capping, and continuation of utility services.
 - c. Coordination of Owner's continuing occupancy of portions of existing facility (in facilities where restrooms are adjacent to other use areas.)

- B. Notify Owner of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials: Hazardous materials such as paint, may be encountered in the Work.
 - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Owner. Hazardous materials will be removed by Owner under a separate contract.
 - 2. If available, Owner will provide material safety data sheets for suspected hazardous materials that are known to be present in buildings and structures to be selectively demolished because of building operations or processes performed there.
- D. Historic Areas: Demolition and hauling equipment and other materials shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.7 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

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

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

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Record Documents.
- C. Survey of Existing Conditions: Record existing conditions by use of photographs or drawings as appropriate.
 - 1. Show existing conditions of adjoining construction or site, including finish surfaces and vegetation that might be misconstrued as damage caused by demolition operations. Submit before Work begins.
 - 2. Inventory and record the condition of items to be removed and salvaged. Show conditions that might be misconstrued as damage caused by salvage operations.
 - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

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

Existing Services/Systems to Be Removed, Relocated, or Abandoned:

- 1. Coordinate and/or arrange to shut off utilities with Owner and utility companies as necessary prior to work.
- 2. Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
- 3. If services/systems are required to maintain continuity of services/systems to other parts of building or site, provide temporary services/systems that bypass work areas.

4. Disconnect, demolish, and remove electrical components indicated on Drawings to be removed.
 - a. Conduit and wiring to be removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - c. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - d. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

3.3 PROTECTION

- A. Temporary Protection: Comply with requirements specified in Section 01 5700 "Temporary Controls". Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and park facilities to remain.
 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- B. Temporary Shoring is not anticipated. If, due to specific conditions, any is necessary: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of areas surrounding openings as part of the work, construction and finishes to remain, and to prevent unexpected or uncontrolled movement of components within facilities.
 1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION OF BUILDINGS OR STRUCTURES, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each component before disturbing supporting members on the next lower level.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 5. Maintain fire watch during and for at least one hour after flame-cutting operations.
 6. Maintain adequate ventilation when using cutting torches.
 7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly. Comply with requirements in Section 01 7419 "Construction Waste Management and Disposal."
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, other adjacent occupied and used facilities, trees and planted areas.
- C. Removed and Salvaged Items:
1. Salvage all existing hardware components noted to be removed, for use by Owner at other facilities (outside of work areas.) Coordinate with Owner and carefully remove any other items indicated to be salvaged by Owner.
 2. Clean salvaged items.
 3. Pack or crate items after cleaning. Identify contents of containers.
 4. Store items in a secure area until delivery to Owner.
 5. Transport items to Owner's storage area, designated by Owner.

6. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Owner, items may be removed to a suitable, protected storage location during selective demolition, cleaned, and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and recycle or dispose of them according to Section 01 7419 "Construction Waste Management and Disposal."
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.

3.6 CLEANING

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

END OF SECTION

SECTION 02 8215

LEAD HANDLING PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section covers all contractors performing any task such as: demolition, selective demolition, plaster removal, sanding, patching, paint preparation, on-site chemical stripping, torch burning, welding, abrasive blasting, or any task performed on painted surfaces that may result in occupational exposures to lead. All contractors performing tasks as identified under OAR 437-03-001 (Lead for the Construction Industry Standard, Oregon) shall be required to perform work in accordance with the standard and these specifications. Contractor must be an EPA Lead-Safe Firm. All work shall be performed in accordance with the EPA RRP Rule, and the contractor will enlist EPA RRP certified personnel.
- B. Work Requirements under this section include but are not limited to: Initial testing and evaluation of work practices, development of a written lead compliance program, lead awareness training, employee monitoring, respiratory protection, engineering controls, containment, wash facilities, and signage.
- C. Lead-containing paints are located at various locations at the facilities. Unless shown otherwise in the Hazardous Building Materials Survey report, contractors are to assume painted surfaces to be lead containing.
- D. Any Contractor that is subject to potential lead exposure shall provide all labor, materials, equipment, and services necessary to comply with OSHA and EPA standards.
- E. The General Contractor and its subcontractors shall endeavor to select work methods that minimize the creation or spreading of lead dust. If work practices or surface preparation methods (e.g., dry sanding, abrasive blasting) create dust that cannot be readily controlled via wet methods or by using basic work area isolation, then the Owner will utilize its Hazardous Material Abatement Contractor to

perform all or portions of the work. The Contractor shall coordinate with the Owner's Representative and its Hazardous Material Abatement Contractor as necessary to accommodate the work.

1.3 RELATED WORK

- A. The Owner may retain an Environmental Consultant to perform the following:
 - 1. Take and analyze air and surface wipe and waste disposal samples before, during, and after lead handling activities. Observe work by the General Contractor and sub-contractors.
 - 2. Monitor the Contractor's compliance with regulatory and specification requirements.

1.4 SUBMITTALS

- A. The Contractor shall submit one copy of the following information to the Owner and prior to beginning work on the project:
 - 1. Worker Training. Submit to the Owner's Representative written proof indicating that all employees impacting lead-containing materials have received training per OAR 437-03-001 and EPA RRP Rule.
 - 2. Lead Compliance Plan. Submit to the Owner's Representative a written "Compliance Plan" satisfactory to the Owner's Representative describing the methods for lead handling procedures, plans for construction and location of decontamination enclosure systems, worker training, protection measures, engineering controls, dust control, and collection techniques, etc. in compliance with OAR 437 Div. 3-001 and EPA RRP Rule, these Specifications, and applicable regulations. The Contractor shall update the Lead Compliance Plan as necessary while work progresses. The General Contractor may elect to incorporate affected subcontractors' individual work plans into an overall project lead compliance program.
 - 3. Product Information and Material Data Sheets. Submit to the Owner's Representative complete product information for chemical removal agents and for any materials, products, and procedures for which the Contractor requests approval for use on this job. The Contractor shall identify any concerns with possible chemical reaction with new materials, coatings, etc. to be installed after chemical stripping.

- B. Contractor shall not begin work until submittals are complete, reviewed, and accepted by the Owner's Representative. Allow a five-day review period.
- C. During the work the Contractor shall submit all sampling and exposure monitoring Data within 5 business days of receiving laboratory results.

1.5 LEAD EXPOSURE MONITORING AND TESTING REQUIREMENTS

- A. Contractors shall perform employee exposure assessments as required under OAR 437-003 for any employees performing tasks that may result in exposures above the Action Level.
- B. An AIHA Independent Testing Laboratory shall be retained by the Contractor. All exposure monitoring analysis shall be performed in accordance with 29 CFR Part 1926.62 as adopted by Oregon Occupational Safety and Health Administration (OR-OSHA).
- C. The Owner reserves the right to monitor Contractor's performance via air, dust wipe, and Toxicity Characteristic Leaching Procedure (TCLP) samples during removal work, in addition to the Contractor's exposure monitoring and testing.

1.6 QUALITY ASSURANCE

- A. Periodic monitoring of air and surface dust may be analyzed by the Owner's Environmental Consultant in occupied spaces and containment areas. The following lead exposure limits shall apply to all areas where lead handling procedures are undertaken.

1. Air Samples:

- b. 30 µg/m³ -OSHA Action Level (8-hour Time-Weighted Average).
- c. 50 µg/m³ -OSHA Permissible Exposure Limit (8-hour Time-Weighted Average).

2. Blood Lead Levels:

- a. 40 µg/dL (OSHA) permissible blood level for worker.
- b. 50 µg/dL (OSHA) blood level requiring medical removal of worker.

- 3. Dispose of as Hazardous Waste: 5 milligrams per liter (mg/L) lead (analyzed as "leachable" using TCLP U.S. Environmental Protection Agency (EPA) Method 1311)

4. Paint: Painted surfaces with lead concentrations greater than the limits of detection as determined by atomic absorption, EPA Method 7420-3050.
 5. Soil:
 2. 400 ppm – High Traffic Play Areas
 3. 1,200 ppm – Non-Play Areas
 6. Waste Water: 0.7 mg/L lead or less to dispose of in the sanitary sewer. The Contractor shall verify with the local authority having jurisdiction on local requirements.
- B. If, at any time during the work, analysis of occupied area air or wipe samples taken by the Contractor, or Owner's Representative, indicates a concentration in excess of the allowable maximums specified, the contractor shall immediately notify:
1. The General Contractor's Superintendent
 2. The Owner's Representative
- C. Immediately upon being notified of concentrations exceeding the specified maximum allowable levels, the Contractor shall perform the following steps in the order presented at no additional cost to the Owner:
1. Stop lead-related work.
 2. The Owner's Environmental Consultant will determine the affected area and affected adjacent areas considered to be contaminated and will determine the actions to be taken.
 3. Modify work procedures, if feasible, and make other changes determined to be the possible cause of high lead concentrations.
 4. Carefully resume work under close supervision and monitoring.
 5. The Contractor shall be responsible for costs of any testing, cleanup, repair, down time loss, etc. that is a result of the Contractor's negligence, poor maintenance of containment areas, or improper procedures.

1.7 PERSONAL PROTECTION

A. Training

1. When demolition or lead handling activities result or are expected to exceed the Action Level, the Contractor shall follow personnel protection and work area isolation procedures outlined in this section.
2. Prior to commencement of work, Contractor shall ensure all workers have been adequately trained as specified in 29 CFR 1926.62 and EPA RRP Rule.
4. The Contractor shall provide and post at hand-wash locations, the decontamination, respirator, and work procedures to be followed by the workers as outlined in the written Lead Compliance Program.
5. Workers shall not eat, drink, chew gum, or apply cosmetics in the established work area. Smoking or using other tobacco products is prohibited.
6. Workers shall be fully protected with respirators and protective clothing immediately prior to the first disturbance of lead-containing or contaminated material and until final cleanup is completed.

B. Building Security and Protection

1. The Contractor shall post adequate warning signs at all potential entrances to work areas as required by EPA and OSHA.
2. Contractor shall protect all existing fixed equipment, existing building finishes that are to remain, and existing systems and functions from damage. Extra precautions are to be taken in protecting existing electrical panels, light fixtures, etc. Any damage to existing building, services, and/or equipment shall be remedied by the Contractor at his expense.
3. Contractor shall maintain access and use of existing fire lanes.

1.8 SAFETY

- A. With regard to the work of this contract, the safety of the Contractor's employees, the Owner's employees, and the public is the sole responsibility of the Contractor.

1.9 PROTECTION

- A. Damaged or deteriorating materials shall not be used and shall be removed from the premises by the Contractor. Materials that become contaminated with lead shall be disposed of in accordance with the applicable regulations by the local authorities having jurisdiction.

1.10 SUBCONTRACTORS

- A. Any Subcontractors employed by the Contractor shall be bound to all the work and safety standards specified elsewhere in this Specification. Subcontractor's personnel shall be fully trained and supervised by the Contractor during performance of this work.

PART 2 - PRODUCTS

1.1 MATERIALS

- A. Plastic Sheet: Plastic sheet shall be fire-retardant polyethylene material sized in lengths and widths to minimize the frequency of joints. The minimum thickness shall be 6-mil.
- B. Plastic Bags: Plastic bags shall be 6-mil polyethylene printed with warning labels per OSHA and EPA regulations.
- C. Tape: Tape shall be capable of sealing joints of adjacent sheets of plastic and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under dry and wet conditions, including use of amended water.
- D. Disposal Containers: Disposal containers for all listed hazardous waste shall be Oregon Department of Transportation (ODOT)-approved #1-A2 55-gallon steel drums unless approved otherwise by the Treatment Storage and Disposal (TSD) and Environmental Consultant.
- E. Warning Labels and Signs: Warning labels and signs shall be posted as required by OR- OSHA, ODOT, and Department of Environmental Quality (DEQ) regulations.
- F. Chemical Strippers: Use of chemical strippers shall require review from the Owner's Representative, General Contractor, and Environmental Consultant.

1.2 TOOLS AND EQUIPMENT

- A. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for high phosphate wash water application.
- B. Electrical: Electrical tools, equipment, and lighting shall meet all applicable codes and regulations. Ground fault protection as required by OSHA, shall be in effect at all times. Contractor shall take all additional precautions and measures necessary to ensure a safe working environment during wet removal.

PART 3 - EXECUTION

3.1 WORK AREA CONTAINMENT PREPARATION

- A. The Contractor shall perform lead handling procedures under full or partial containment when work practices are expected to create exposures greater than the Permissible Exposure Limit (PEL) of 50 µg/m³. The following lead handling procedures shall always be performed under full containment: abrasive blasting, welding, and torch cutting; grinding or dry sanding; heat gun removal; and chemical stripping of lead paints or varnishes with volatile and caustic chemicals. Partial containment will be acceptable for tasks such as selective demolition, spot chemical removal, and patching of surfaces.
- B. Contractor shall perform the following containment procedures in the order in which they are presented. Alternative engineering control methods considered by the Contractor must be proven by historical data and approved by the Owner's Environmental Consultant. The liberal use of water spray, ventilation, and high-efficiency particle air (HEPA) filtration devices are most effective for reducing airborne lead concentrations.

3.2 PARTIAL CONTAINMENT WORK AREA PREPARATION

- A. Tasks requiring partial containment include items such as: Selective demolition, exterior paint removal, patching, and repair of painted components and other tasks where incidental exposures to airborne lead concentrations are likely to occur. Historical monitoring of similar procedures may alleviate partial containment requirements.
- B. Contractor shall perform the following procedures in the order in which they are presented, and describe procedures for exterior paint removal and other work in non- isolated work areas.
 - 1. Seal off airflow HVAC systems serving other building areas.
 - 2. Restrict access to work area and post warning signs.
 - 3. Install localized HEPA exhaust fan in work area if feasible. Locate fan intake to immediate area of work in such a manner that any lead dust released will be drawn away from the worker and into intake duct.
 - 4. Cover floor and other surfaces below work area with 6-mil plastic sheeting. Porous materials should be covered, contained or removed from the work areas.
 - 5. Have emergency cleanup equipment and supplies, including HEPA vacuum, wash water, disposal bags, mop, buckets, towels, and sponges on hand prior to start of work.

- C. When work is complete, the Contractor shall remove all visible debris from the work area. Once area has been cleaned, the Contractor shall notify the Owner's Environmental Consultant to perform Dust Wipe Sampling as specified in this section. If the area is clean and free of dust and debris, but sample analysis shows concentrations above the stated levels, the Owner may choose to have its Hazardous Materials Abatement Contractor perform additional cleaning.

3.3 WASTE DISPOSAL

- A. General: Disposal of building demolition waste coated with lead-based paint will generally not require a hazardous waste determination (i.e., TCLP testing) if demolition debris is disposed of at a solid waste landfill that is permitted by DEQ and which meets the current design standards for municipal solid waste disposal facilities of 40 CFR Part 258.
- B. Other Contractor generated waste streams shall be tested and properly disposed of by the Contractor. Concentrated lead-based paint waste will require a hazardous waste determination (i.e., TCLP testing). The Contractor shall properly dispose of concentrated lead-based paint waste that is deemed hazardous.

END OF SECTION

SECTION 07 9200

JOINT SEALANTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes elastomeric joint sealants for building applications shown or indicated, and as required to establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.2 SUBMITTALS

- A. Product Data for each joint sealant product indicated, including manufacturer's recommended installation procedures.
- B. Samples: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Warranties: Copies of special installers and manufacturers warranties.
- D. SWRI Validation: Evidence that each exterior elastomeric sealant has been validated by the Sealant Weatherproofing Restoration Institute's (SWRI) Sealant Validation Program.
- E. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
 - 1. Joint substrates and sealant backings have been tested for compatibility and adhesion with joint materials.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- F. Field Test Report Log: For each exterior elastomeric sealant application.
- G. Field Samples:
 - 1. Apply 10 lineal feet field samples of exterior and wet area interior sealants.
 - 2. Acceptable field samples may be incorporated in the Work.

1.3 QUALITY ASSURANCE

- A. Applicator Qualifications: Use workers trained and experienced in necessary crafts and familiar with requirements and methods needed for proper performance of Work of this Section.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- C. Quality Standard: Sealant, Waterproofing and Restoration Institute (SWRI) requirements for materials and installation.
- D. Preconstruction Compatibility and Adhesion Testing: Submit to joint sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
 - 1. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
 - 2. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
 - 3. For materials failing tests, obtain joint sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
 - 4. Testing will not be required if joint sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates.
- E. Provide products that have been tested according to SWRI's Sealant Validation Program for compliance with requirements specified within a 36 month period preceding commencement of the Work.
- F. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 01 Section for "Project Management and Coordination."

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to job site in their manufacturer's original containers, with labels intact and legible, and maintain intact until time of use.
- B. Do not retain material that has exceeded shelf life recommended by manufacturer.

1.5 ENVIRONMENTAL CONDITIONS

- A. Do not install sealant when joint substrates are wet, or ambient and substrate temperature conditions are outside limits recommended by manufacturer.

1.6 WARRANTY

- A. Special Installer's Warranty: Provide warranty in which installer agrees to repair or replace elastomeric joint sealants that do not comply with performance requirements specified in this Section, including joint sealant failure to provide air and watertight seal, loss of adhesion or cohesion, or failure to cure.
 - 1. Duration of warranties from date of Substantial Completion: 5 years.
- B. Special Manufacturer's Warranty: Provide warranties in which manufacturer agrees to repair or replace elastomeric joint sealants that do not comply with performance requirements specified in this Section, including joint sealant failure to provide air and watertight seal, loss of adhesion or cohesion, or failure to cure.
 - 1. Duration of warranties from date of Substantial Completion:
 - a. 20 years for exterior use Silicones.
 - b. 20 year non-stain warranty for exterior sealants.
 - c. 5 years for Polyurethane sealants.

PART 2 PRODUCTS

2.1 MATERIALS - GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Stain Characteristics: Provide elastomeric joint sealant products that are non-staining to porous substrates and have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- C. Colors: As selected from manufacturer's full range of standard colors.
 - 1. In exposed installation, use color of approximate color of adjacent surfaces, unless otherwise approved.
 - 2. In concealed installation use standard gray or black sealant.

2.2 SEALANT MATERIALS

A. Elastomeric Sealant

1. Industry Standard: ASTM C 920, Class 25, Grade NS, non-sag.
2. Type: Type S, one component, DOW 795, or eq.
3. Composition: One-part, neutral cure, RTV silicone sealant.
4. Joint Movement Range: +/- 50 percent.

2.3 BACKUP MATERIALS

- A. Use only those backup materials that are non-absorbent, non-staining, and specifically recommended by manufacturer for installation with type of sealant used.
- B. Sealant Backer Rod: Provide one of the following Type B backing rods (bicellular material with a surface skin) unless otherwise recommended by sealant manufacturer:

1. Nomaco Inc.: "Sof Rod."
2. BASF Sonneborn: "Soft Backer Rod."
3. Or Approved Equal

- C. Bond Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer. Provide self-adhesive tape where applicable.

2.4 MISCELLANEOUS MATERIALS

- A. Primer: Use only those primers which have been tested for durability on surfaces to be sealed, and are specifically recommended by sealant manufacturer for adhesion of joint sealant substrates, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to sealant and backing material manufacturer, formulated to promote optimum adhesion of sealant with joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealant and surfaces adjacent to joints.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine joints to receive joint sealants for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface clean joints immediately before installing sealant complying with manufacturer's instructions, and the following:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of sealant, including dust, oil, grease, rust, lacquer, laitance, loose mortar, ice and frost.
- B. Concrete and Masonry:
 - 1. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, or mechanical abrading; remove loose particles from cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 2. Where surfaces have been treated, remove surface treatment by sandblasting or wire brushing.
 - 3. Remove laitance and mortar from masonry joint cavities
 - 4. Remove laitance and form-release agents from concrete.
- C. Metal surfaces:
 - 1. Scrape steel surfaces with metal or wire brush to remove mill scale and rust.
 - 2. Clean nonporous surfaces with chemical cleaner which leaves no residue to remove oil and grease, and protective coatings, wiping surfaces with clean rags.
- D. Prime joints substrates where recommended by sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience.
 - 1. Apply primer to comply with joint sealant manufacturer's written instructions.
 - 2. Confine primers to areas of joint sealant bond.
- E. Use masking tape where required to prevent contact of sealant with adjoining surfaces that would otherwise be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears.

3.3 INSTALLATION

- A. Install joint sealers in accordance with recommendations of ASTM C 1193, and manufacturer's recommended installation procedures, as applicable to materials, applications, and conditions indicated.
 - 1. Do not paint silicone sealants.
 - 2. Where painting of sealants is a concern, obtain approval of Architect prior to application where use of polyurethane sealants is allowed.
- B. Sealant Backings:
 - 1. Install material to uniform depth below sealant.
 - 2. Using tool, smoothly and uniformly place backup material to depth of approximately 1/2 joint width (1/4 inch to 1/2 inch), compressing backup material 25 percent to 50 percent and securing a positive fit.
 - 3. Do not leave gaps between ends of sealant backings.
 - 4. Do not stretch, twist, puncture, or tear sealant backings.
- C. Install bond breaker tape behind sealant where sealant backing is not used between sealant and back of joints.
- D. Install sealant by proven techniques at the same time backings are installed.
 - 1. Thoroughly fill joints to recommended depth with sealant in direct contact with joint substrates.
 - 2. Produce uniform, cross sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
 - 3. Prevent three-sided adhesion of sealant to substrates.
- E. Tool joints to profile shown in Drawings, or as indicated below if such profiles are not shown in Drawings.
 - 1. Provide uniformly smooth joints with slightly concave surface, flush at edges with adjacent surface, according to ASTM C 1193, unless otherwise indicated.
 - 2. Do not use tooling agent unless specifically recommended in writing by sealant manufacturer.
 - 3. Leave sealant surface neat and smooth.
 - 4. Ensure sealants in joints adequately adhere to substrates per manufacturer's instructions, and joint cavities are filled and free of voids.

5. Ensure sealant dimensions and configurations comply with specified requirements.

3.5 CLEANING, ADJUSTMENT AND PROTECTION

- A. Clean adjacent exposed surfaces free from sealant as installation progresses, using cleaning agent recommended by manufacturer of sealant used.
 1. Repair damaged surfaces.

END OF SECTION

SECTION 08 1113

STANDARD HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes the following fabricated according to ANSI/SDI A250.8:
 - 1. Hollow metal steel doors.
 - 2. Hollow metal welded steel frames.
 - 3. Metal louvers within door frames.
- B. Related Sections:
 - 1. Section 02 4119: Selective Demolition
 - 2. Section 07 9200: Joint Sealants
 - 3. Section 08 7100: Door Hardware, for factory preparation requirements for hardware installed in hollow metal doors and frames.
 - 4. Section 09 9100: Painting, for paint finish for hollow metal doors and frames.

1.2 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, core descriptions, label compliance, and finishes for each type of hollow metal door and frame specified.
- B. Shop Drawings showing fabrication and installation of each type of hollow metal door and frame, elevations of door designs, details of openings, dimensions, and anchorage.
- C. Certification: Submit certification that work of this Section complies with ANSI/SDI A250.8, or equivalent standards of HMMA 861 (Hollow Metal Manufacturers Association).
 - 1. Submit a separate certification by manufacturer of steel doors and frames that preparation of metals and factory applied primer is as specified in Section 09 9100, "Painting."

1.3 QUALITY ASSURANCE

- A. Use skilled workers trained and experienced in necessary crafts and familiar with requirements and methods needed for proper installation of work of this Section.
- B. Provide doors and welded frames from a single manufacturer, unless otherwise specifically approved by Owner.
- C. Minimum Quality Standards: Comply with latest edition of following standards of ANSI and the Steel Door Institute (SDI):
 - 1. ANSI/SDI A250.8, Recommended Specifications for Standard Steel Doors and Frames.
 - 2. SDI 105, Recommended Erection Instructions for Steel Frames.
 - 3. SDI 109, Hardware for Standard Steel Doors and Frames.
 - 4. SDI 112, Zinc-Coated Standard Steel Doors and Frames.
 - 5. SDI 117, Manufacturing Tolerances Standard Steel Doors and Frames.
 - 6. SDI 118, Basic Fire Door Requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use nonvented plastic.
- B. Store in protected dry area, in a vertical position with heads up, on minimum 4 inch high wood blocking, spaced 1/4 inch minimum between each stacked door to permit air circulation.
- C. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

1.5 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames, and as required with other trades to assure proper and adequate provision in work of those trades for interface with work of this Section.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Hollow Metal Doors and Welded Frames:
 - 1. Acceptable Manufacturers: Subject to compliance with requirements, provide products by manufacturers indicated, or if not indicated,

manufacturers that can provide and certify to fabrication of products that meet or exceed requirements of ANSI, SDI (Steel Door Institute), or HMMA (Hollow Metal Manufacturers Association), and requirements of these specifications.

2. Substitutions for Specified Manufacturers: Submit according to requirements of Division 01 Section for "Substitutions."

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008, Commercial Steel (CS), Type B, suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653, Commercial Steel (CS), Type B; with minimum G60 zinc (galvanized) metallic coating.
- D. Frame Anchors: ASTM A 879, Commercial Steel (CS), 40Z coating designation; mill phosphatized.
 1. Anchors Built Into Exterior Walls: Steel sheet complying with ASTM A 1008 or ASTM A 1011, hot-dip galvanized according to ASTM A 153, Class B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanize according to ASTM A 153.
- F. Grout: Nonshrink, Nonmetallic Grout: Factory packaged, non-staining, noncorrosive, nongaseous grout, complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for exterior applications.
 1. Subject to compliance with requirements provide one of the following:
 - a. Euclid Chemical Co.: NS Grout.
 - b. Master Builders: Masterflow 713 or 928.
 - c. W.R. Meadows: Sealtight 588 Precision Grout.
 - d. Five Star Products, Inc.: Five Star Fluid 100 Grout.
- G. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15 mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.3 STANDARD HOLLOW METAL DOORS

- A. General: Provide hollow metal doors of design indicated, thickness as indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces, unless otherwise indicated. Comply with ANSI A250.8 for level and model and ANSI A250.4 for physical performance level.
- B. Exterior Doors: Level 3 and Physical Performance Level A (Extra Heavy Duty), Model 1, Full Flush Design.
 - 1. Material: Minimum 0.053 inch (16 gage) uncoated thickness, cold-rolled, metallic coated sheet steel.
 - 2. Core: Steel channel grid with vertical steel stiffeners, bonded to both face sheets. Coat interior faces of door with sound-deadening material, and place inorganic mineral fiber insulation between stiffeners filled full height of the door.
 - 3. Acceptable Manufacturers: Amweld, Ceko, Curries, Deansteel, Fenestra, Mesker, Pioneer, Republic, or Steelcraft.
- C. Thickness: 1-3/4 inches, unless otherwise indicated.
- D. Size: Field verify existing frame opening, and size new assembly as required to fit frame opening and other site conditions.
- E. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

2.4 STANDARD HOLLOW METAL WELDED FRAMES

- A. Provide hollow metal welded steel frames for doors, according to ANSI A250.8 and with details indicated for type and profile.
- B. Fabricate frames with mitered or coped corners, full profile welded.
 - 1. Fabricate frames with backbend return (double backbend) where necessary for proper installation in existing wall assembly.
- D. Exterior Frames: Minimum 0.067 inch (14 gage) uncoated thickness metallic coated cold-rolled steel sheet.
 - 1. Acceptable Manufacturers: Amweld, Ceko, Curries, Deansteel, Fenestra, Mesker, Pioneer, Republic, or Steelcraft.
- E. Louver Assemblies within Frames: Minimum 0.060 inch (16 gage) uncoated thickness metallic coated cold-rolled steel sheet.

- F. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as frames.
- G. Fabricate frames to suit existing site conditions for coordinated and fully-functional assembly operation.
- H. Provide frames with steel spreader temporarily attached to the feet of both jambs to serve as a brace during shipping and handling.

2.5 FABRICATION

- A. General: Fabricate hollow metal door and frame units to be rigid, free of defects, warp, or buckle.
 - 1. Fabricate exposed faces of doors and panels from only cold-rolled steel sheet.
 - 2. Fabricate concealed stiffeners, reinforcement, edge channels, louvers, and molding from either cold or hot-rolled steel sheet.
 - 3. Close top and bottom of doors flush, except where approved by Owner for an inverted U channel to accommodate specified hardware.
 - a. Close top of exterior stile and rail doors with 16 gage steel flush cap.
 - 4. Bevel lock and hinge side edges of doors 1/8 inch in 2 inches.
- B. Exterior Doors:
 - 1. Provide weep hole openings in bottom of exterior doors to permit moisture to escape.
 - 2. Seal joints in top edges of doors against water penetration.
- C. Welded Frames:
 - 1. Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
 - 2. Exposed Fasteners: Provide countersunk flat or oval heads for exposed screws and bolts, provide tamperproof fasteners as directed by Owner.
 - 3. Plaster Guards: Weld guards to frame at back of hardware mortises in frames installed in concrete or masonry.
 - 4. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.

5. Jamb Anchors: Locate anchors appropriate for substrate not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. Utilize manufacture's most durable recommended jamb anchors appropriate to the adjacent wall substrate materials and conditions.
 - a. Stud-Wall Type:
 - 1) Three anchors per jamb up to 60 inches high.
 - 2) Four anchors per jamb from 60 to 90 inches high.
 - 3) Five anchors per jamb from 90 to 96 inches high.
 - 4) Two anchors per head for frames above 42 inches wide and mounted in metal-stud partitions
 - b. Masonry Type:
 - 1) Two anchors per jamb up to 60 inches high.
 - 2) Three anchors per jamb from 60 to 90 inches high.
 - 3) Four anchors per jamb from 90 to 120 inches high.
 - c. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c
- D. Clearances: Fabricate with following clearances, except for fire doors provide clearances according to NFPA 80.
 1. Between doors and frames: 1/8 inch.
 2. Between door bottoms and thresholds: 1/2 inch undercut. Between door bottoms and floor: 1/2 inch undercut. Reference drawings and note that in specific locations that a 1" undercut is required, for additional ventilation.
 4. Between meeting edges of non-fire rated pairs of doors: 3/32 inch
- E. Tolerances: Comply with SDI 117.
- F. Hardware Preparation: Factory prepare doors and frames to receive hardware according to final door hardware components to be installed, and templates provided by hardware supplier.
 1. Comply with requirements of ANSI/SDI A250.6 and BHMA A156.115 specifications for preparation of hollow metal work for hardware.
 2. Provide space, cutouts, reinforcing for concealed overhead door closers and provisions for fastening in top rail of doors or head of frames, as applicable.

3. Locate hardware as recommended for proper installation by hardware manufacturer, and in accordance with ANSI/SDI A250.8.

2.6 FINISHES

- A. Preparation: Clean surfaces and apply pretreatment of conversion coating of type suited to organic finish coating.
- B. Hollow Metal Steel Doors and Welded Steel Frames: Factory Prime for Field-Painted Finish:
 1. Apply zinc-rich primer rust inhibitive immediately after surface and pretreatment, primer as specified in Section 09 9100, "Painting."
- C. Factory Primed Hollow Metal Steel Doors and Frames: Field apply finish coats of paint as specified in Section 09 9100, "Painting."
- D. Coat inside of frame profile with bituminous coating to a thickness of 1/8 inch at frames to be grouted solid.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which work of this Section will be performed.
 1. Correct conditions detrimental to timely and proper completion of Work.
 2. Do not proceed until unsatisfactory conditions are corrected.
- B. Verify head and jamb conditions once existing door and frame have been removed, replicate existing conditions and coordinate membrane and/or metal head flashing for proper weatherproofing.

3.2 INSTALLATION

- A. Install hollow metal doors and frames plumb, rigid, properly aligned, and securely fastened in place; comply with Descriptions of the Work, existing conditions, requirements of governmental agencies having jurisdiction, and manufacturer's and referenced standard's recommended installation procedures for fully-functional and proper-operating assemblies.
- B. Placing Frames: Comply ANSI/SDI 250.11, and the following:

1. Where possible, place frames prior to construction of enclosing walls.
 2. Set frames accurately into position, aligned and braced securely until permanent anchors are set.
 - a. Frames in final position to be plus or minus 1/16 inch maximum from squared and plumbed alignment.
 3. After frames have been installed and wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
 4. At in-place construction, set frames and secure to adjacent construction with machine screws and suitable anchorage devices. Provide "Z" fillers at each screw location.
 5. Provide sealant between frame and adjacent wall material.
 6. Grout frames solid where located in concrete and masonry walls.
 - a. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
 - b. Concrete Walls: Solidly fill space between frames and masonry with grout in lifts and take precautions, including bracing frames, to ensure that frames are not deformed or damaged by grout forces.
 7. Metal-Stud Partitions: Solidly pack mineral-fiber insulation behind frames.
 8. Fill frames in stud framed walls separating heated from unheated spaces with fiberglass or mineral wool thermal insulation.
- C. Installing Doors:
1. Set doors flush with frame face and plumb to hold in any position.
 2. Fit doors accurately in frames within specified clearances.
 3. Install door hardware and doors after finishing door and frame assemblies.

3.3 CLEANING, ADJUSTMENT AND PROTECTION

- A. Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including standard steel doors or frames that are warped, bowed, or otherwise unacceptable.
1. During warranty period, check and adjust operating finish hardware items for smooth and quiet operation.
- B. Immediately after erection, sand smooth rusted and damaged areas of prime coat, and apply touch up of compatible, air-drying primer.

- C. Clean exposed surfaces of Work of this Section and repair as required.

END OF SECTION

SECTION 08 7100

DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes finish hardware for doors.
- B. Related Sections:
 - 1. Section 08 1113: Standard Hollow Metal Doors and Frames, to be provided templates for hardware.

1.2 SUBMITTALS

- A. Product data including manufacturer's technical data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements and proper coordination with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
- B. Templates: For doors, frames, and other work specified to be factory prepared for the installation of door hardware.
 - 1. Verify with shop drawings and other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Samples: Of each type of exposed hardware unit in finish indicated and tagged with full description for coordination with schedule. Submit samples prior to submission of final hardware schedule.
 - 1. Samples will be returned to supplier. Units that are acceptable and remain undamaged may after final check of operation may be incorporated in the work, within limitations of keying coordination requirements.

1.3 QUALITY ASSURANCE

- A. Provide services of an AHC or DAHC member of Door Hardware Institute to:

1. Be available for consultation with Architect/Owner at no additional cost to Owner during progress of construction.
 2. Be available to meet with Owner to finalize keying requirements and to obtain final instructions in writing.
- B. Hardware consultant may be an employee of supplier.
- C. Single Source Responsibility: Obtain each type of hardware from a single manufacturer.
- D. Hardware supplier shall have and maintain a factory direct status with all manufacturers specified or approved during the course of the project to insure quality product knowledge and quick lead-time response.

1.4 REGULATORY REQUIREMENTS

- A. Comply with requirements of ANSI A117.1, The Americans with Disabilities Act (ADA), and State Building Code accessibility requirements for the disabled.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Individually package each unit of finish hardware, complete with proper fastenings and appurtenances, clearly marked on outside to indicate contents and specific locations in Work.
- B. Coordinate the delivery of hardware with the scheduled installation and fabrication of doors and frames.
- C. Provide an experienced employee designated to receive, take charge of, and distribute hardware at building site.
- D. Provide locked secure area for storage of hardware on site.
- E. Protect from damage. Store above ground and under cover.

1.6 KEYING INFORMATION

- A. Keying Meeting:
1. Arrange a meeting with hardware supplier and Owner to review keying requirements with hardware schedules.

2. Hardware supplier is to prepare a final keying schedule based on keying meeting results.

- A. If required provide keying and bitting information to Owner at no cost.

1.7 WARRANTY

- A. Provide manufacturer's standard written warranties for the following:

1. Warrant operation of closers for 10 years.
2. Warrant operation of electrical and pneumatic closers for 2 years.
3. Warrant operation of exit devices for 3 years.

1.8 CERTIFICATION

- A. Prior to Substantial Completion Date, provide written certificate that hardware is complete and conforms to Specifications and approved submittals.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Provide products by manufacturers indicated on project Hardware Set Component List and Hardware Component Cutsheet Sections of the documents.

2.2 GENERAL

- A. Fasteners:

1. Furnish necessary flat head screws, bolts, and other fasteners of suitable size and type to anchor hardware in position for long life under hard use.
2. Where necessary, furnish fasteners with expansion shields, sex bolts, and other anchors as required. Provide material to which hardware is to be applied, and recommended by hardware manufacturer.

- a. Toggle bolts are not permitted.

3. Provide fasteners that harmonize with hardware as to finish and material.
4. Conceal if possible when door is in closed position; exposed fasteners to have tamperproof fasteners as directed by Owner.

- a. Through-Bolting not permitted.

B. Locks and Latches: Verify:

1. Operation.
2. Hand of doors.
3. Function for each opening.

C. Closers: Verify for each door:

1. Hand of door.
2. Degree of opening.
3. Frequency of use.
4. Head condition.
 - a. Provide closers that do not limit door swing.
 - b. Furnish drop plates for narrow top rails.
 - c. Furnish manufacturer's standard one-piece cast arm at parallel arm location.
 - d. Furnish closers at fire-resistant rated doors, exterior doors and elsewhere as shown.

D. Hinges:

1. Furnish hinges of sufficient throw to clear trim where hinges are required to swing 180 degrees.
2. Furnish minimum 1-1/2 pair of hinges per leaf, unless specifically scheduled otherwise.

E. Furnish silencers for door frames at rate of three for each single door and two for each door or pair of doors, except gasketed doors and doors with light seals or sound seals.

F. Furnish door stops in number and type to protect finishes wherever doors or hardware thereon could strike adjacent surfaces.

2.3 KEYING

A. Construction keying:

1. Furnish a construction key system with 6 keys for locks and cylinders: 3 for Contractor and 3 for Owner.
2. Use only construction keys during construction.

3. Upon Substantial Completion of Work, Parks locksmith will replace construction cores with appropriate Parks cores. Construction cores will be returned to Contractor.

2.4 ACCEPTABLE PRODUCTS

- A. Single Source: Except as specifically otherwise approved in advance by Owner, furnish for each items (such as "Door Hinge Type 1") products and manufacturers as noted on the Hardware Set Component List and Hardware Component Cutsheet Sections of the documents.
- B. Locks and Latches:
 1. Latchbolt: Anti-friction type with curved strike lip.
 - a. Provide extended lip where necessary to protect door frame trim from damage.
 - b. Match hardware finish.
 2. Fabricate with 3-3/4 inches backset from door edge where surface applied gasketing at door frame stops and 2-3/4 inches elsewhere.
 3. Provide lever handle, unless otherwise indicated.
- C. Hinges: Mortise type, with non-removable pins at out-swinging doors with locks.
 1. Furnish with flat tips and retainer device to prevent rising during use.
 2. Furnish full mortise hinges 4-1/2 by 4-1/2 inches, unless otherwise noted.
- D. Door Closers / Operators:
 1. Mount on room side, and not corridor or lobby side of doors bordering circulation system unless otherwise shown. Mount on interior side of exterior doors.
 2. Fasteners to be concealed.
 3. Closer shall have heavy duty arms, adjustable spring power with indicator dial, stick-on templates, and self-reaming/tapping screws.
 4. Pressure relief valves are not permitted.
- F. Stops:

1. Provide wall stops; do not install floor stops unless specifically approved by Owner.

H. Kickplates:

1. Provide metal kickplates specified in Door Hardware Groups.
2. Anchor kickplates with oval-head full-thread screws, spaced uniformly at a maximum of 5 inches on center at kickplate perimeter.

I. Threshold:

1. Anchor thresholds with a positive anchoring device or expansion shield and anchor bolts.
2. Set thresholds in elastomeric sealant as indicated in Section 07 9200, "Joint Sealants."

- J. Provide hardware in finishes indicated on the Hardware Set Component List and Hardware Component Cutsheet Sections of the documents.

PART 3 EXECUTION

3.1 COORDINATION

- A. Coordinate as necessary with other trades to assure proper and adequate provision in work of those trades for interface with work of this Section.

3.2 INSTALLATION

- A. Install work of this Section in accordance with:

1. Hardware groups specified.
2. Approved Schedule.
3. Applicable requirements of governmental agencies having jurisdiction.
4. Templates.
5. Manufacturer's and referenced standard's recommended installation procedures.

- B. Hardware Locations: Mount hardware at locations recommended by manufacturer, requirements of ANSI A117.1, ADA, and State Building Code, as applicable.

- C. Set units level, plumb and true to line and location.

1. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- D. Cut and fit threshold or floor plates to door frame profile with mitered corner joints; weld multiple pieces together. Set in full bead of sealant.
1. Secure to substrate with positive anchoring devices.
- E. After fitting mortised hardware to surfaces to receive a finish, remove and store hardware in original package in a secure place, and permanently reinstall after finishing has been completed.
1. Properly wrap installed hardware subjected to hand usage during construction for protection; Replace hardware units at no expense to Owner where finish has been damaged by construction activities.

3.4 ADJUSTING, CLEANING, AND PROTECTION

- A. Upon completion of Work, and as a condition of acceptance, provide inspection, and adjustment of operating hardware, to ensure proper operation or function of every unit.
1. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
 2. Clean operating units as necessary to restore proper function and finish of hardware and doors.
- B. Manufacturer's representative to adjust closers as necessary to meet ADA and State Building Code requirements for time required for closing operation and opening force.
- C. Clean adjacent surfaces soiled by hardware installation and repair damaged surfaces.
- D. Six Month and One Year Adjustment: Approximately six months, and prior to one year, after date of Substantial Completion, the installer shall return to the Project to perform the following work:
1. Examine and adjust each item of door hardware as necessary to restore proper operation and function of doors and hardware to comply with specified requirements.
 2. Replace hardware items that have deteriorated or failed due to faulty design, materials, or installation of hardware units.
 3. Prepare a written report of current and predictable problems of substantial nature in the performance of the hardware.

END OF SECTION

SECTION 09 9100

PAINTING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and application of paints and coatings.
- B. Related Sections:
 - 1. Section 02 4119: Selective Demolition
 - 2. Section 07 9200: Joint Sealants
 - 3. Section 08 1113: Standard Hollow Metal Doors and Frames
 - 4. Division 26: Electrical, for painting of electrical work.

1.2 WORK NOT INCLUDED

- A. Unless otherwise indicated, painting is not required on surfaces in concealed areas and inaccessible areas such as furred spaces, foundation spaces, pipe spaces, and duct shafts.
- B. Metal surfaces of anodized or painted aluminum, stainless steel, chromium plate, copper, bronze, and similar finished materials shall not require painting under this Section, unless otherwise noted.
- C. Do not paint moving parts of operating units; mechanical or electrical parts such as valve operators; linkages; sensing devices; and motor shafts.
- D. Do not paint required labels or equipment identification, performance rating, name, or nomenclature plates.
- E. Do not paint gypsum board walls above suspended ceilings.

1.3 REFERENCES

- A. The Master Painters Institute (MPI): Architectural Painting Specification Manual.

1.4 DEFINITIONS

- A. "Paint", as included in this specification, means coating, systems materials including primers, emulsions, epoxy, stained enamels, sealers, fillers, and other applied materials whether used as primer, intermediate, or finish coats.
- B. Gloss/Sheen Parameter (Reflectance based off 60 degree angle reading) based on MPI (The Master Painters Institute) Standard:
 - 1. Flat: Gloss Level Maximum 5 units
 - 2. Velvet (High Sheen Flat): Gloss Level Maximum 10 units
 - 3. Eggshell: Gloss Level 10-25 units
 - 4. Satin: Gloss Level 20-35 units
 - 5. Semi-Gloss: Gloss Level 35-70 units
 - 6. Gloss: Gloss Level 70-85 units
 - 7. High Gloss: Gloss Level More than 85 units

1.5 SUBMITTALS

- A. Product Data: Materials list of required coating materials. Identify each material by manufacturer's catalog number, general classification, and cross-reference with finish system, and application.
 - 1. Include material manufacturer's recommended minimum dry film thickness for each finish system.
- B. Samples:
 - 1. Stepped Samples, defining each separate coat, of each color and material to be applied.
 - a. Provide one sample of each drawdown, minimum 8 by 8 inches in size, each marked with specified color designation.
 - c. If requested by Owner, submit during construction representative samples of the actual substrate.
 - 2. Revise and resubmit Samples as requested until required sheen, color, and texture is achieved. Approved Samples become standards of color and finish for accepting or rejecting Work of this Section.
 - 3. Do not commence painting until approved Samples are on file at job site.
 - 4. Submit updated Finish Schedule in the Project Closeout Manual.

1.6 QUALITY ASSURANCE

- A. Use skilled workers who are trained and experienced in crafts and familiar with requirements and methods needed for proper performance of Work of this Section.
- B. Provide Work in conformance with recommendations in MPI's "Architectural Painting Specification Manual."

1.7 REGULATORY REQUIREMENTS

- A. Provide products that comply with the following: local regulations controlling use of volatile organic compounds (VOCs).

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver in manufacturer's original unopened containers with legible labels intact.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum temperature of 45 degrees F.

1.9 PROJECT CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 degrees F.
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 degrees F.
- C. Use low temperature paint products equal to specified products, as approved, for applications when air temperatures are below 50 degrees F.
- D. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or to damp or wet surfaces.
 - 1. Applications may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the paint manufacturer as being suitable during application and drying periods.

PART 2 PRODUCTS

2.1 PAINTS – ACCEPTABLE PRODUCTS

- A. Subject to compliance requirements, provide paint products listed in Article 2.5, MATERIAL SCHEDULE at the end of PART 2.

- 1. Substitutions: Submit according to requirements of Division 01 Section for "Substitutions," with paint manufacturer's evidence that proposed substitution is equal or superior to product specified.

2.2 PAINTS - MANUFACTURERS AND PRODUCT CRITERIA

- A. Subject to compliance requirements, provide paint products listed in Article 2.5, MATERIAL SCHEDULE at the end of PART 2.

- 1. Provide paint products that comply with the following limits for VOC content by weight in grams/liter of product minus water, based on Green Seal definition:

- a. Interior Flat Paints: 50
 - b. Interior Non-Flat Paints: 150
 - c. Interior Anti-Corrosive Paints: 250

- 2. Substitutions: Submit according to requirements of Division 01 Section for "Substitutions," with paint manufacturer's evidence that proposed substitution is equal or superior to product specified.

2.3 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide fillers, primers, and finish coat materials that are compatible with one another and the substrates indicated under service and application, as demonstrated by manufacturer based on testing and field experience.

- B. Undercoats and Thinners:

- 1. Provide undercoat paint produced by same manufacturer as finish coat.
 - 2. Use only thinners recommended by paint manufacturer, and use only to recommended limits.
 - 3. Insofar as practicable, use undercoat, finish coat, and thinner material as parts of a unified system of paint finish, except where material is factory primed.
 - 4. Where accent colors are scheduled or indicated, provide appropriate and sufficient undercoats accordingly.

- C. Colors: Match colors indicated by reference to manufacturer's color designations.

2.4 APPLICATION EQUIPMENT

- A. For application of paint materials, use only such equipment as is recommended for application of particular paint by manufacturer of that paint, and as approved by Architect.
- B. Prior to use of application equipment, verify proposed equipment is compatible with material to be applied, and integrity of finish will not be jeopardized by use of proposed equipment.

2.5 MATERIAL SCHEDULE

A. Primers:

- 1. Wood, Brick, Cement Plaster, and Unglazed Tile
 - a. Benjamin Moore High-Hiding All Purpose Primer.
 - b. Or approved equal.
- 2. Metal:
 - a. Benjamin Moore Ultra Spec HP D.T.M. Acrylic.
 - b. Or approved equal.

B. Finish Paints:

- 1. Brick, Cement Plaster, and Unglazed Tile
 - a. Benjamin Moore Ultra Spec Masonry Acrylic Latex.
 - b. Or approved equal.
- 2. Wood:
 - a. Benjamin Moore Ultra Spec EXT.
 - b. Or approved equal.
- 3. Metal:
 - a. Benjamin Moore HP D.T.M. Acrylic.
 - b. Or approved equal.

2.6 SHEEN / GLOSS

- A. Restroom Interior: Semi-Gloss
- B. Restroom Exterior: Satin

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.
 - 1. Do not proceed with application of paint until unsatisfactory conditions have been corrected and surfaces are receiving paint are thoroughly dry.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates.
 - 1. Provide barrier coats over non-compatible primers, or remove primer and reprime as required to achieve compatibility with finish coatings.
 - 2. Notify the Architect in writing of anticipated problems using materials specified over substrates primed by others.
- C. Ensure that moisture-retaining substrates to receive coatings have moisture content within tolerances allowed by coating manufacturer.
 - 1. Maximum Moisture Content of Substrates:
 - a. Concrete: 12 percent.
 - b. Masonry (Clay and CMU): 12 percent.
 - c. Wood: 15 percent.
 - d. Portland Cement Plaster: 12 percent.
 - e. Gypsum Board: 12 percent.

3.2 PREPARATION

- A. General: Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
 - 1. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted.

If removal is impractical or impossible, provide surface-applied protection prior to surface preparation and painting.

2. After completion of painting operations in each space or area, reinstall removed items by using workers who are skilled in trades involved.

B. Cleaning and Preparation:

1. Clean and prepare surfaces to be painted in strict accordance with paint manufacturer's recommendations for each substrate condition, and the following:
 - a. "Exterior Surface Preparation" Sections in MPI's Architectural Painting Specification Manual.
2. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall onto wet painted surfaces.

C. Preparation of Concrete Substrates:

1. Remove release agents, curing compounds, efflorescence, and chalk.
2. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

D. Preparation of Masonry Substrates:

1. Remove efflorescence and chalk.
2. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.

E. Preparation of Metal Substrates:

1. Ungalvanized, Uncoated Surfaces: Clean surfaces until free from dirt, oil, and grease, and loose mill scale.
 - a. Clean using methods recommended in writing by paint manufacturer, but not less than the following:
 - 1) SSPC-SP3, "Power Tool Cleaning."
2. Ungalvanized, Coated Surfaces: Clean surfaces until free from dirt, oil, and grease, and touch up bare areas and shop applied prime coats that have been damaged. Touch up with the same primer as the shop coat.

3. Galvanized surfaces: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

G. Materials Preparation:

1. Mix and prepare paint materials in accordance with manufacturers' instructions.
2. When materials are not in use, store in tightly covered containers.
3. Maintain containers used in storage, mixing, and application of paint in a clean condition, free from foreign materials and residue.
4. Stir materials before application, producing a mixture of uniform density.
 - a. Do not stir surface film into material; remove surface film and, if necessary, strain material before using.

3.3 APPLICATION

A. General:

1. Apply paint materials in accordance with manufacturers and referenced standard's recommended installation procedures, and as indicated in the paint schedules at the end of PART 3.
2. Paint surfaces behind movable items same as similar exposed surfaces.
3. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Omit primer on metal surfaces that have been shop primed and touch up painted.
6. Tint undercoats similar toned color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied.
7. Apply additional coats where undercoats, stains, or other conditions show through the final coat of paint, until paint finish is uniform in color, appearance, and opacity.

B. Drying:

1. Allow sufficient drying time between coats, modifying period as recommended by material manufacturer to suit weather conditions.

2. Consider oil-base and oleo-resinous solvent-type paint as dry for recoating when paint feels firm, does not deform or feel sticky under moderate pressure of thumb, and when application of another coat of paint does not cause lifting or loss of adhesion of undercoat.
- C. Brush Applications:
1. Brush out and work brush coats onto surface in an even film.
 2. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, and other surface imperfections to be repaired.
- D. Spray Application:
1. Where spray application is used, apply each coat to provide hiding equivalent of brush coats.
 2. Do not double back with spray equipment to build up film thickness of two coats in one pass.
- E. For completed Work, match approved Samples as to texture, color, sheen.
1. Remove, refinish, or repaint work not in compliance with specified requirements.
- F. Minimum Coating Thickness: Provide the total dry film thickness of the entire system specified, but in no case less than recommended by the manufacturer.
1. For opaque finishes, apply additional coats when undercoats, stains or other defects show through final paint coat, until paint film is of uniform finish, color, and appearance.
 2. Match acceptable color, gloss, and texture samples and field samples for color, gloss and texture.
- G. Miscellaneous surfaces and procedures:
1. Exposed mechanical items:
 - a. Finish electric panels, access doors, conduits, plug mold, pipes, ducts, grilles, registers, vents, and items of similar nature to match the adjacent wall and ceiling surfaces in finished spaces.
 - b. Paint visible duct surfaces behind vents, registers, and grilles flat black.

- c. Wash galvanized metal with solvent, prime, and apply 2 coats of specified enamel.
2. Hardware:
 - a. Paint prime coated hardware to match adjacent surfaces.
 - b. Paint metal portions of head seals, jamb seals, and astragal seals to match color of door frame, unless otherwise directed by Owner.
3. Wet Areas (Toilet Rooms, Showers, Kitchens, Janitors, and the like):
 - a. Add an approved fungicide to paint.
4. Paint exposed surfaces behind movable equipment and furniture the same as adjacent surfaces.

3.4 FIELD QUALITY CONTROL

- A. The Owner reserves the right to engage an independent testing agency to sample the paint material being applied, and test for minimum coating thickness.
- B. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
- C. The Owner may direct the Contractor to stop painting if test results show material being used does not comply with specification requirements.
 1. The Contractor shall pay for testing, and repaint surfaces found to be coated with noncomplying paints. If the noncomplying paints are incompatible with specified paints, the Contractor may be required to remove noncomplying paint from painted surfaces.

3.5 CLEANING

- A. Remove from the site each day, empty cans, rags, rubbish, and other discarded refuse created by Work of this Section, and dispose of in a legal manner.
 1. Do not dump waste materials, including thinners, on site.
 2. Do not use sanitary or storm drains.

3.6 PROTECTION

- A. Protect Work of other trades against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs at newly painted finishes.
- C. Touch up and restore damaged or defaced painted surfaces caused by other trades.

3.7 PAINT SCHEDULE

- A. Painting Schedule for All Surfaces:
 - 1. Brick, Cement Plaster, and Unglazed Tile:
 - a. One coat Primer.
 - b. Two coats Finish Paint.
 - 2. Wood:
 - a. One coat Primer.
 - b. Two coats Finish Paint.
 - 3. Metal:
 - a. One coat Primer.
 - b. Two coats Finish Paint.

END OF SECTION

SECTION 26 0500

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Common requirements for electrical systems.

1.2 RELATED SECTIONS

- A. Section 01 3100 Project Management and Coordination
- B. Section 01 3300 Submittal Procedures
- C. Section 01 7000 Execution and Closeout Requirements

1.3 REFERENCE STANDARDS

- A. The latest adopted revisions of the following publications form a part of this specification and the other specifications in Division 26 to the extent referenced. The publications are referred to in the text by basic designation only:

1. Illuminating Engineers Society (IES).
2. International Building Code (IBC).
3. Institute of Electrical and Electronic Engineers (IEEE).
4. International Electrical Testing Association (IETA).
5. International Electrotechnical Commission (IEC).
6. International Fire Code (IFC).
7. Intertek Electrical Testing Laboratories Listed (ETL).
8. National Electrical Contractors Association (NECA).
9. National Fire Protection Association:
 - a. NFPA 70: National Electrical Code (NEC)
 - b. NFPA 70E: Standard for Electrical Safety in the Workplace
10. Oregon Energy Efficiency Specialty Code
11. Oregon Fire Code (OFC).
12. Oregon Structural Specialty Code.

1.4 COORDINATION

- A. Coordinate with all other trades involved in installation of equipment that requires electrical connections or that shares the same space as the electrical equipment, electrical wiring or appurtenances.
 - 1. Examine the Drawings to coordinate with and avoid conflicts with other equipment, structural members, cabinets, counters, etc.
 - a. Verify the physical dimensions of each item of electrical equipment to fit the available space.
 - b. Determine all equipment proposed to fit into available space, and the access routes through construction.
 - 2. Confirm rough-in and wiring requirements with equipment supplier and installer for all equipment provided under other divisions of Work that require electrical connections.
 - a. Make installation and connections in accordance with rough-in and wiring diagrams provided by equipment supplier and installers.
- B. Arrange raceways, wiring, and equipment to permit ready access to switches, motors, and control components. Keep space in front of doors and access panels clear.
- C. Coordinate all aspects of electrical service connections with the service provider.
 - 1. No additional compensation will be allowed for additional work or equipment not covered in the Drawings or Specifications but required by the serving utility.
- D. Coordinate underground Work with the work of others working on the site.
 - 1. Coordinate electrical Work with storm sewer, sanitary sewer, gas, water and irrigation lines to avoid conflicts.
 - 2. Common trenches may be used with other trades, providing clearances required by codes, ordinances and service provider are maintained, and with prior approval from Owner.

1.5 SUBMITTALS

- A. Provide submittals according to Section 01 3300 Submittal Procedures requirements and the following:

1. Submit product, material and equipment data and shop drawings in 3-1/2" expanding pocket file folders.
 - a. Provide one folder for each Division 26 Section requiring submittals, with all required data of that Section grouped together.
 - b. Include at the front of each folder a complete index for all Sections and materials requiring submittals.
- B. Shop Drawings: Submit for review and approval prior to beginning installation:
 1. Show all outlets, devices, terminal cabinets, conduits, clearances, wiring, and connections required for a complete system.
 2. Prepare detailed drawings to scale of panel layouts in electric cabinets, rooms or closets, utilizing dimensioned shop drawing data of equipment to be furnished.
 3. Provide additional wiring details at switchboards, motor control centers, and other areas where work is of sufficient complexity to warrant additional detailing for coordination.
 4. Prepare plan view drawing to scale showing underground installations, including conduits, cabinet pads and junction boxes with proposed common trenches with other utilities.
- D. Closeout Submittals:
 1. Copies of certification of code authority acceptance.
 2. Operating and Maintenance Manuals:
 - a. Provide a separate chapter for each class of system as follows:
 - 1) Secondary distribution system.
 - 2) Low voltage distribution system.
 - b. Content of each chapter to include, but not limited to, the following:
 - 1) Description of system.
 - 2) Test data.
 - 3) Operating Sequence and Procedures:
 - aa. Step-by-step procedure for system start-up, including a pre-start checklist. Refer to controls and indicators by nomenclature consistent with that used on panels and in control diagrams.

- bb. Detailed instruction in proper sequence, for each mode of operation (i.e., day-night, staging of equipment).
- cc. Emergency Operation: If some functions of the equipment can be operated while other functions are disabled, give instructions for operations under those conditions. Include here only those alternate methods of operations (from normal) which the operator can follow when there is a partial failure or malfunctioning of components or other unusual condition.
- dd. Shutdown Procedure: Include instructions for stopping and securing the equipment after operation. If a particular sequence is required, give step-by-step instructions in that order.

4). Preventive Maintenance:

- aa. Provide a schedule for preventive maintenance. State the recommended frequency of performance of each preventive maintenance task such as cleaning, inspection, and scheduled overhauls.
- bb. Cleaning: Provide instructions and schedules for all routine cleaning and inspection with recommended lubricants.
- cc. Inspection: If periodic inspection of equipment is required for operation, cleaning, or other reasons, indicate the items to be inspected and give the inspection criteria.
- dd. Provide instructions for lubrication and adjustments required for preventive maintenance routines. Identify test points and given values for each.

5) Manufacturers' Brochures: Include manufacturers' descriptive literature covering devices and equipment used in the system, together with illustrations, exploded views, and renewal parts lists. Edit manufacturers' standard brochures so that information applying to equipment actually installed is clearly defined.

- 3. Guarantees and warranties.
- 4. Record documentation.

E. Maintenance material submittals.

1.6 QUALITY ASSURANCE

A. Qualifications

1. Installer: A firm with not less than 5 years of successful experience in installation of products similar to those required for this project, and licensed in the state in which the work is to be performed.

B. Materials: Provide new materials of the best quality, American-made.

1. Provide materials manufactured in accordance with applicable standards.

C. Electrical Products: Provide products listed and labeled by the UL or by a recognized independent testing laboratory approved in writing by the local inspection authority.

1.7 WARRANTY

A. Warrant all electrical apparatus to be:

1. Appropriate for the application for which it was installed.
2. Built and installed to deliver the full rated capacity at the efficiency for which each individual apparatus was designed.
3. Operable at full capacity without objectionable noise or vibration.

B. Warrant systems against failure or damage caused by any system component.

PART 2 PRODUCTS

1.1 MANUFACTURERS

- A. Provide like products from only one manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Drawings are diagrammatic with symbols representing electrical equipment, outlets, luminaires, and wiring.

- B. Examine the entire set of Drawings to avoid conflicts with other systems. Determine exact route and installation of electrical wiring, footings, poles and equipment with conditions of construction.

3.2 INSTALLATION

- A. Install a complete, properly operating system for each item of equipment specified.
 - 1. Install equipment in accordance with manufacturer's instructions, the best industry practices, and as indicated.
 - 2. Where a conflict in instruction for installation occurs, request a clarification before work is roughed in.
 - a. Remove and correct conflicting Work installed without clarification at no cost to the Owner.
- B. Install equipment in a neat, finished, and safe manner according to the latest published NECA Standard of Installation under competent supervision.
- C. Where electrical equipment is installed in sleeves or block-outs penetrating rated fire barriers, install intumescent material around ducts, conduits, etc., to prevent spread of smoke or fire.
 - 1. Use a penetration sealing system capable of passing a 3 hour test in according to ASTM E- 814 (UL 1479), consisting of material capable of expanding nominally 8 times when exposed to temperatures of 250-350° degrees F. An alternate method utilizing intumescent materials in caulk and/or putty form may be used.
- D. Do not install electrical equipment in obvious passages, doorways, scuttles, crawl spaces or in other places that would impede or block the passageway's intended use.

3.3 EXCAVATION AND BACKFILL

- A. Perform excavation and backfill for installation of electrical work in compliance with applicable requirements of Divisions 31 and 33, and as described in this Article.
- B. Steel or Non-Metallic Conduit: Place a minimum 3 inch cover of sand or clean earth fill around the cable or conduit on a leveled trench bottom.
 - 1. Place conduit on a smooth, level trench bottom, so that contact is made for its entire length.

2. Remove water from trench while electrical conduit is being placed.
- C. Place backfill in layers not exceeding 8 inches deep and compact to 95 percent of maximum density at optimum moisture.
 1. Interior: Bank sand or pea gravel.
 2. Exterior: Excavated material with final 8 inches of clean soil.
- D. After backfilling, grade trenches level with surrounding soil. Dispose of excess soil off site.
- E. Patch asphalt or concrete surfaces disturbed by electrical work.

3.4 NOISE CONTROL

- A. Minimize transmission of noise between occupied spaces.
 1. Do not place outlet boxes back to back or use straight through boxes, except where specifically permitted in the Drawings.
 2. Keep products and equipment clean before, during and after installation.
- B. Minimize penetrations through sound rated walls.
 1. Route conduit along corridors or other space that is not sound rated.
 2. Grout penetrations through sound-rated partitions solid and airtight.
 3. Do not rigidly connect (i.e. bridge) conduit and its associated attachment device to independent wall structures. Use flexible connections and attachments.
- C. Do not place contactors, transformers, starters, and similar noise producing devices on walls which are common to occupied spaces, unless specifically shown in the Drawings.
 1. Where such devices must be mounted on walls common to occupied spaces, they must be shock mounted or isolated in such a manner as to effectively prevent the transmission of their inherent noise to the occupied space.

3.5 EQUIPMENT CONNECTIONS

- A. Provide complete electrical connections, including incidental wiring, materials, devices, and labor necessary for a finished working installation.

- B. Verify the location and method for connecting to each item of equipment prior to roughing-in. Check the voltage and phase of each item of equipment before connecting.
- C. Make motor connections for the proper direction of rotation.
 - 1. Use minimum 1/2 inch size flexible conduit for mechanical equipment, except at small control devices where 3/8 inch flex may be used.
 - 2. For exposed wiring, provide jacketed metallic flexible conduit with a minimum 6 inch slack loop.
 - 3. Do not test run pump motors until liquid is in the system.

3.6 EQUIPMENT SUPPORT

- A. Provide supports and fastening devices for electrical equipment, luminaires, panels, outlets, and cabinets capable of supporting not less than 4 times the ultimate weight of the object or objects fastened to or suspended from the building structure.
- B. Properly install and adequately support luminaires from the building structure.
 - 1. Provide supports that properly align and level luminaires.
 - 2. Where flexible connections are permitted for exposed luminaires, provide connections that are neat and straight, without excess slack, attached to the support device.
- C. Support all junction boxes, pull boxes, or other conduit terminating housings located above the suspended ceiling from the floor above, roof, or penthouse floor structure to prevent sagging or swaying.
- D. Conduits:
 - 1. Support suspended conduits 1 inch and larger from the overhead structural system with metal ring or trapeze hangers and threaded steel rod having a structural safety factor of 4.
 - a. Conduits smaller than 1 inch, installed in ceiling cavities, may be supported on the mechanical system supports when available space and support capacity has been coordinated.
 - 2. Anchor conduit installed in poured concrete to the steel reinforcing with No. 14 black iron wire.

- E. Powder actuated or similar shot-in fastening devices will not be permitted for any electrical work except by special written permission by Owner.

3.7 ALIGNMENT

- A. Install panels, cabinets, and equipment level and plumb, parallel with structural building lines.
 - 1. Fit panels and electrical enclosures neatly without gaps, openings, or distortion.
 - 2. Properly and neatly close all unused openings with approved devices.
- B. Fit surface panels, devices, and outlets with neat, appropriate trims, plates, or covers without overhanging edges, protruding corners, gaps or raw edges to leave a finished appearance.

3.8 CUTTING AND PATCHING

- A. Include cutting, patching and restoration of finishes where necessary.
 - 1. Perform cutting and patching according to the requirements of Section 01 3100 Project Management and Coordination.
 - 2. Neatly patch and finish surfaces damaged by electrical work, and spaces around conduits passing through floors and walls, to match the adjacent construction, including painting .
 - 3. Clean up and remove all dirt and debris .
- B. Locate and size access panels as indicated or with prior approval of Owner.

3.9 PROTECTION OF WORK

- A. Keep switchgear, transformers, panels, luminaires, and electrical equipment covered or closed to exclude dust, dirt, and splashes of plaster, cement, and paint, and all other contamination.

3.10 MAINTENANCE OF SERVICE

- A. Where a portion of a building is occupied during construction, maintain service to all functioning portions of the building during normal working hours of the building, except as otherwise indicated.
- B. Minimize electrical power outages to occupied areas. Pre-arrange necessary outages with the Owner.

1. Be liable for any damages resulting from unscheduled outages, or for outages not confined to pre-arranged times.
- C. Keep signal, communication systems, and equipment in operation wherever they serve occupied or functional portions of the building. Pre-arrange necessary outages with the Owner.
 1. Be liable for any damages resulting from unscheduled outages, or for outages not confined to pre-arranged times.
- D. Coordinate disruption of telephone services with the Owner in advance and in a manner that service required by the building occupants can be maintained.
- E. Provide temporary facilities and necessary provisions to maintain electrical, signal and communications services. Remove temporary wiring and facilities before final acceptance.

3.11 COMPLETION AND TESTING

- A. Test systems prior to Substantial Completion to show that installed equipment operates as designed and specified, free of faults and unintentional grounds.
 1. Test as many systems at one time as possible to work into construction phasing.
 2. Perform tests in the presence of the Owner or his representative. Provide 48 hours advance notice for scheduled tests.
- B. Have a journeyman electrician with required tools available to conduct all tests, regardless of whether the equipment factory representative is present or not.
- C. Compile a written record of tests performed, with dates performed and witnessed. Submit with operating and maintenance data to the Owner prior to final acceptance.

END OF SECTION

SECTION 26 0519

LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes Low Voltage (600W and Below) Power Conductors and Connections:

1. Cables and wires.
2. Connectors.
3. Lugs.

- B. Related Requirements:

1. Section 01 7000 Execution and Closeout.
2. Section 26 0500 Common Work Results for Electrical.

1.2 REFERENCES

- A. ICEA: Insulated Cable Engineers Association.

- B. Underwriters Laboratory (UL):

1. UL 62: Flexible Cords and Cables.
2. UL 83: Thermoplastic-Insulated Wires and Cables.
3. UL 1581: Reference Standard for Electrical Wires, Cables and Flexible Cords.

1.3 ABBREVIATIONS

- A. AWG: American Wire Gauge.
- B. GFI: Ground Fault Interrupter.
- C. MC: Metal clad.
- D. THW: Thermoplastic insulation, heat resistant, wet rated.

- E. THWN-2: Thermoplastic insulation, heat resistant, wet rated with nylon jacket.
- F. XHHW: Cross-linked polyethylene (XLPE) insulation, high heat resistant, wet rated.

1.4 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for specified products, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.
- B. Documentation of dynamometer readings from cable pulls.
- C. Conductor insulation test reports.

1.5 QUALITY ASSURANCE

- A. Electrical Products:
 - 1. Provide products in conformance with requirements of NFPA 70.
 - 2. Provide all products of each type from the same manufacturer.
 - 3. Provide products conforming to requirements of UL 62, UL 83 and UL 1581.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver conductors to job site in cartons, protective covers, or on reels.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Conductors: General Cable, Okonite, Southwire Company, Cerro or approved equal.
- B. Connectors:
 - 1. Branch circuit conductor splices:
 - a. Live spring: Scotchlok, Ideal Wire Nut, 3M, or approved equal.
 - b. Self-stripping: Buchanan B-Cap, 3M Series 560, or approved equal.
 - c. Cable splices: Anderson, Burndy, IlSCO, Kearney, or approved equal.

2. Splices in handholes, manholes, underground vaults or wet locations: 3M DBR-6, 3M 82-A, 3M "Scotchcast" 85 Series, or approved equal.
3. Terminator Lugs: Burndy, Anderson, or approved equal.

2.2 CONDUCTORS

A. Copper Cable:

1. No. 12 AWG minimum unless noted otherwise, solid or stranded.
2. No. 8 and larger, Class B concentric or compressed stranded.
3. Copper Insulation:
 - a. Interior: THW, THWN-2 unless noted or specified otherwise.
 - b. Exterior: XHHW unless noted or specified otherwise.
4. Rate through wiring for 90 degree C minimum.
5. Do not use aluminum conductors.

B. Power Limited Wiring:

1. Copper, stranded or solid as recommended by the system manufacturer.
2. Use insulation appropriate for the system and location used.

2.3 CONNECTORS

A. Use commercial-grade splicing materials.

B. Branch Circuit Conductor Splices:

1. Live spring type.
2. Self-stripping type.
3. Cable Splices: Compression tool applied sleeves with 600V heat shrink insulation:
 - a. Provide watertight cable splices in underground vaults, weather exposed locations or wet locations.
 - b. Make splices in handholes and manholes watertight with epoxy resin type splicing kits.

C. Terminator Lugs for Stranded Wire:

1. No. 10 Wire and Smaller: Spade flared, tool applied.

2. No. 8 Wire and Larger: Compression tool applied.
 - a. Set screw type terminator lugs supplied as an integral part of switches and circuit breakers will be acceptable.

PART 3 EXECUTION

3.1 CONDUCTORS

- A. Complete electrical raceway installation before starting installation of conductors and cables.
 1. Do not pull in wire until all bushings are installed and raceways terminations are completed.
 2. Do not pull wire into conduit embedded in concrete until after the concrete is poured and forms are stripped.
- B. Install conductors without damaging insulation.
- C. Pulling compounds may be used for pulling all power and PVC jacketed communications cables.
 1. Clean residue from the conductors and raceway entrances after the pull is made. Do not use pulling compounds for installation of conductors connected to GFI circuit breakers or GFI receptacles.
- D. Use pulleys or blocks for alignment of conductors when pulling.
 1. Pull in accordance with manufacturer's specifications regarding pulling tensions, bending radii of the cable, and compounds.
 2. Use a dynamometer on cable pulls to insure that the maximum allowed cable tension is not exceeded.
 3. Notify the Owner prior to cable pulls.
 4. Record the maximum strain of each pull.
- E. Provide one dedicated neutral conductor for each circuit conductor on a single phase circuit.
- F. Conductors inside cabinets, boxes, equipment and panelboards:
 1. Hold conductors away from sharp metal edges.

2. Cable and tree all wires for power and control. Use plastic ties in panels and cabinets.
 3. Neatly train and lace wiring. Maintain proximity of current pairs or triplexes.
 4. Tie and bundle feeder conductors in wireways of panelboards.
- G. Make up and insulate wiring promptly after installation of conductors.
- H. Splice cables only with written permission.
1. Show splice locations on Record Drawings.
- I. Make conductor lengths for parallel circuits equal.
- J. Where connection of cables installed under this section is made by others, provide pigtails minimum 12 inches long for neat, trained and bundled connections.

3.2 CONNECTORS

- A. Terminate control and special systems wires with a tool applied spade flared lug when terminating at a screw connection.
- B. Make screw and bolt type connectors tight and re-tighten after an eight hour period and prior to Substantial Completion.
- C. Install tool applied compression connectors according to manufacturer's recommendations; physically check for tightness.
- D. Make splices in accessible junction boxes.
- E. Terminate copper conductors on tin-plated aluminum-bodied compression connectors in accordance with manufacturer's instructions. Fill with antioxidant compound prior to installation of conductor.
- F. Use suitable reducing connectors or mechanical connector adapters for connecting copper conductors to aluminum lugs or bussing.
- G. Use solderless pressure connectors with insulating covers for copper wire splices and taps 8 AWG and smaller.
1. For 10 AWG and smaller, use insulated spring wire connectors with plastic caps on lighting and receptacle circuits.

- H. Terminate control circuit conductors at terminal block only.

3.3 COLOR CODING

- A. Color code wiring in accordance with NEC and appropriate NFPA Standards.
- B. Color code secondary service, feeders, and branch circuit conductors.
1. Use consistent coding scheme at all feeder terminations: A-B-C left-to-right, A-B-C top-to-bottom, or A-B-C front-to-back.
 2. Color code as follows:

Phase	208Y/120V	120V/240V	480V/277
A	Black	Black	Brown
B	Red	Red	Orange
C	Blue	Blue	Yellow
Neutral	White	White	Gray
Ground*	Green	Green	Green

* Grounds for isolated ground receptacles: Green with yellow tracer.

- C. Use solid color compound or solid color coating for No. 12 and No. 10 branch circuit conductors and neutral sizes.
- D. Phase conductors No. 8 and larger color code using one of the following:
1. Solid color compound or solid color coating.
 2. Stripes, bands, or hash marks of color specified above.
 3. Colored as specified using 3/4-inch wide tape.
 - a. Apply tape in half overlapping turns for a minimum of three inches for terminal points and in junction boxes, pull boxes, troughs, manholes, and handholes.
 - b. Apply the last two laps of tape with no tension to prevent possible unwinding.
 - c. Where cable markings are covered by tape, apply tags to cable stating size and insulation type.
- E. Color code switch legs and travelers to be consistent with the phases to which connected or a color distinctive from that listed.

- F. Color code flexible wiring system conductors and connectors according to manufacturer's standard.
- G. Color code in conformance with the existing wiring system for modifications and additions.

3.4 FIELD QUALITY CONTROL

- A. Tests
 - 1. Test conductor insulation on feeders of 60 amp and greater for conformity with 1000 volt megohmmeter. Use ICEA testing procedures. Minimum insulation resistance acceptable is 1 megohm for systems 600 volts and below. If insulation resistance is less than 1 megohm, notify Owner's Representative.
 - 2. Test Report: Prepare a typed tabular report indicating the testing instrument, the feeder tested, amperage rating of the feeder, insulation type, voltage, the approximate length of the feeder, conduit type, and the measured resistance of the megohmmeter test. Submit report with operating and maintenance manual included in project closeout documentation.

END OF SECTION

SECTION 26 0526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Complete grounding for electrical systems:
 - a. Conduit system.
 - b. Electrical equipment and neutral bus.
 - c. Miscellaneous grounds as required.
2. Main bonding jumper.

B. Related Sections:

1. Section 26 0500 Common Work Results for Electrical
2. Section 26 2000 Secondary Distribution System.

1.2 REFERENCES

- A. Institute of Electrical and Electronics Engineers Standards Association (IEEE 81-2012): IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System.
- B. National Fire Protection Association 70 National Electrical Code Article 250 (NEC 250): Grounding and Bonding.
- C. Underwriters Laboratory UL 467: Grounding and Bonding Equipment.

1.3 SUBMITTALS

- A. Product Data for each product or device specified. Include manufacturer's standard catalog pages and data sheets for grounding and bonding system components.
- B. Shop Drawings indicating proposed arrangement for signal reference grids. Include locations of items to be bonded and methods of connection.

1.4 QUALITY ASSURANCE

- A. Electrical Products: Provide products in conformance with requirements of NFPA 70, IEEE 81-2012 and UL 467.

PART 2 PRODUCTS

2.1 MANUFACTURERS: Burndy, O-Z/Gedney, Thomas & Betts, or approved equal.

2.2 GROUND CONDUCTORS

- A. Interior Bonding Systems: Bare or green insulated copper.
- B. Underground or Exterior Systems: Bare copper.
- C. Circuit Ground Conductors Installed in Raceways: 600 Volt insulation to match phase and neutral conductor insulation rating.

2.3 CONNECTORS

- A. Cast, set screw or bolted type.
- B. Form poured, exothermic welds.
- C. Grounding lugs, where required by code, as standard manufacturer's items.

2.4 GROUND PADS

- A. 1000 Ampere rated copper bus nominally 1/4 inch by 3 inches by 12 inches long.

2.5 GROUND RODS

- A. Ground Rods: 5/8 inch by 10'-0" long copper clad steel.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Provide insulated 600 Volt main bonding jumper as directed by service utility.
- B. Ground Conductors: Size in accordance with NEC 250, Tables 250-122 and 250-66.

- C. Ground Conductor Connectors: Make up tight to ensure low impedance.
- D. Ground the electrical system, the cold water service, structural steel, and transformers, to the building ground grid.
- E. Provide equipment ground conductor in branch circuits.
- F. Provide ground bonding to above ground portion of metal gas piping in accordance with NEC 250.104(B).
- G. Solidly ground all separately derived systems to the nearest water piping.

3.2 EQUIPMENT

- A. Provide separate green insulated equipment ground conductor in all electrical raceways.
 - 1. Effectively ground all luminaires, panels, controls, motors, disconnect switches, exterior lighting standards, and noncurrent carrying metallic enclosures.
 - 2. Use bonding jumpers, grounding bushings, lugs, busses, etc., for this purpose.
- B. Provide grounding bushings on all feeder conduit entrances to panels and equipment enclosures and bond bushings to enclosures with minimum No. 10 AWG conductor.
 - 1. Connect the equipment ground to the building system ground.
 - 2. Use the same size equipment ground conductors as phase conductors, up through No. 10 AWG.

END OF SECTION

SECTION 26 0533

CONDUITS, RACEWAYS, BOXES, FITTINGS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Raceways.
2. Conduit fittings, hangers and appurtenances.
3. Junction and pull boxes.

B. Related Sections:

1. Section 26 0500 Common Work Results for Electrical
2. Section 26 0519 Low Voltage Electrical Power Conductors
3. Section 26 0526 Grounding and Bonding for Electrical Systems.

1.2 REFERENCE STANDARDS

A. National Fire Protection Association 70 National Electrical Code (NEC):

1. NEC 342: Article 342 Intermediate Metal Conduit, Type IMC.
2. NEC 344: Article 344 Rigid Metal Conduit, Type RMC.
3. NEC 348: Article 348 Flexible Metal Conduit, Type FMC.
4. NEC 350: Article 351 Liquidtight Flexible Metal Conduit, Type LFMC.
5. NEC 358: Article 358 Electrical Metallic Tubing, Type EMT.

B. American Society for Testing and Materials (ASTM) F512, Standard Specification for Smooth-Wall Polyvinyl Chloride (PVC) Conduit and Fittings for Underground Installation: ASTM F512.

C. National Electrical Manufacturers Association, Polyvinyl Chloride (PVC) Plastic Utilities for Underground Installations: NEMA TC-6.

D. Underwriters Laboratory Standard for Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings: UL 651.

1.3 SUBMITTALS

- A. Product Data for each type of electrical device specified. Include manufacturer's standard catalog pages and data sheets for conduits, fittings, and raceways and boxes.
- B. Shop Drawings, including the following:
 - 1. Proposed arrangement for conduits installed within structural concrete slabs.
 - 2. Proposed locations of roof penetrations and methods for sealing.

1.4 QUALITY ASSURANCE

- A. Electrical Products: Provide products in conformance with requirements of NFPA 70.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Raceways: Allied Steel, Certainteed, Jones & Laughlin, Carlon, Kraloy, or approved equal.
- B. Conduit Fittings: O-Z Gedney, Thomas & Betts, Crouse & Hinds, or approved equal.
- C. Outlet Boxes: Bowers, Hubbell, Raco, or approved equal.
- D. Weatherproof Outlet Boxes: Bell, Red Dot, Carlon, or approved equal.
- E. Secure Weatherproof Receptacle Enclosure: Fouch Electric or approved equal.
- F. Weatherproof-In-Use Covers: Thomas & Betts – Red Dot or approved equal.
- G. Junction and Pull Boxes: Circle AW, Hoffman, or approved equal.
- H. Box Extension Adapter: Bell, Red Dot, Carlon, or approved equal.
- I. Conduit Fittings: O-Z Gedney, Thomas & Betts, or approved equal.

2.2 METALLIC CONDUITS

- A. Galvanized Rigid Conduit (GRC): Smooth surfaced heavy wall mild steel tube of uniform thickness and temper, reamed and threaded at each end and protected inside and out with galvanizing, sherardizing, or equivalent process. Comply with requirements of NEC 344.

- B. Intermediate Metallic Conduit (IMC): Smooth surface, intermediate wall mild steel tube of uniform thickness and temper, reamed and threaded at each end, and protected inside and out with galvanizing, sherardizing, or equivalent process. Comply with requirements of NEC 342.
- C. Electrical Metallic Tubing (EMT): Smooth surface, thin wall mild steel tube of uniform thickness and temper, galvanized or sherardized on the outside, and enameled on the interior. Comply with requirements of NEC 358.
- D. Flexible Conduits (Flex):
 - 1. Flexible Metallic Conduit: Interlocking single strip steel construction, galvanized inside and out after fabrication. Comply with requirements of NEC 348.
 - 2. Liquid Tight: Similar to flexible metallic conduit, except encased in a liquid tight polyvinylchloride or equivalent outer jacket over the flexible steel core. Comply with requirements of NEC 350.

2.3 NON-METALLIC CONDUITS

- A. Underground Ducts:
 - 1. PVC, Encased Burial: Type EB for concrete encasement, meeting or exceeding the current requirements of EB-20, ASTM F512, NEMA TC-6 and UL 651. Suitable for use with 90 degree C rated wire.
 - 2. PVC, Direct Burial: Type DB suitable for direct burial, meeting or exceeding the current requirements of DB-20, ASTM F512 and NEMA TC-6. Suitable for use with 90 degree C rated wire.
- B. Rigid Non-Metallic Conduit: Type II PVC Schedule 40, suitable for use with 90 degree C rated wire. Conduit shall conform to UL 651 and carry appropriate UL listing for above and below ground use.

2.4 WIREWAYS

- A. Troughs: Steel, painted, square in cross section, preformed knock-outs on standard spacing, screw cover.
- B. Fittings: Provide tees, elbows, couplings as required for configurations shown in the Drawings.

2.5 FITTINGS

A. GRC and IMC:

1. Threaded Locknuts: Sealing type where used with NEMA Types 2, 3, 3R, 4 and 12 enclosures.
2. Threaded Bushings: 1-1/4 inch and larger, insulated, grounding type as specified in Section 26 0526, "Grounding and Bonding for Electrical Systems".
3. Threaded Couplings: Standard threaded of the same material and as furnished with conduit supplied. Erickson type couplings may be used where required to complete conduit runs larger than 1 inch.

B. EMT:

1. Connectors: Steel compression ring or steel set screw type for conduit termination, with insulated throat, suitable for conditions used. Use lay-in grounding type bushings where terminating grounding conductors.
2. Couplings: Steel compression ring or steel set screw type, concrete tight.

C. Threadless: GRC and IMC couplings and box connectors may be steel threadless, compression ring or set screw type for use with conduits 1 inch and smaller where installed in poured concrete locations, or where limited working space makes threaded fittings impractical.

D. Weatherproof Connectors: Threaded.

E. Expansion Couplings: Equal to O.Z. type EX with jumper.

F. Seal-Offs: With filler fiber, compound, and removable cover.

2.6 METALLIC BOXES

A. Flush and Concealed Outlet Boxes: Galvanized stamped steel with screw ears for device ring mounting, knock-out plugs, mounting holes, fixture studs if required.

B. Surface Outlet Boxes:

1. Ceilings: Galvanized stamped steel same as for flush and concealed outlet boxes.
2. Walls: Steel or aluminum with threaded hubs or bosses.

C. Junction or Pull Boxes: Painted, welded steel construction with screw cover for boxes exceeding 4-11/16 inches square; Steel gauge as required for physical size.

- D. Systems: Boxes for systems devices as recommended by the systems manufacturer, suitable for the equipment installed. Equip with grounding lugs, brackets, device rings, etc., as required.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Conceal conduits in finished spaces.
 - 1. Run concealed conduits in a direct line with long sweep bends and offsets.
 - 2. Embed GRC and IMC in concrete below grade or in damp locations; make watertight by painting the entire male thread with Rustoleum metal primer or equal before assembly.
- B. Route exposed conduit parallel or at right angles to structural building lines, neatly offset into boxes.
 - 1. Closely follow surfaces for conduits attached directly to building.
 - 2. Use conduit fittings to “saddle” under beams.
 - 3. Coordinate with Owner drilling or notching of existing beams, trusses on structural members.
- C. Rigidly secure GRC and IMC terminations at boxes, cabinets, and general wiring enclosures with double locknuts and bushings or approved fittings.
 - 1. Where conduit boxes with threaded hubs or bosses are used, screw in conduit, engaging at least 5 threads in hub.
 - 2. Use insulating bushings d for conduits 1-1/4 inches or larger.
- D. Keep conduit and raceways closed with suitable plugs or caps during construction to prevent entrance of dirt, moisture, concrete, or foreign objects.
 - 1. Ensure that raceways are clean and dry before installation of wire at the time of acceptance.
- E. Pack spaces around conduits with polyethylene backing rods and seal with polyurethane caulking to prevent entrance of moisture where conduits are installed in sleeves or block-outs penetrating moisture barriers.

3.2 CONDUIT

- A. GRC may be used in all areas for wiring systems.
 - 1. Install GRC for wiring underground in cast concrete construction, in damp locations, and in hazardous areas for serving fire pump controllers.
 - 2. Install GRC made up tight where subject to mechanical injury with threaded fittings.
 - 3. IMC may be used in locations not in contact with earth or fill.
- B. EMT may be used in dry protected locations.
 - 1. Provide green equipment bonding conductor where used for power circuit feeders 2-inch and larger.
 - 2. Whether exposed or concealed, install EMT securely supported and fastened at intervals of nominally every 8 feet and within 24 inches of each outlet, ell, fitting, panel, etc.
- C. Use flex for connections to vibration producing equipment, and where installation flexibility is required, with a minimum 12 inches slack connection.
 - 1. Limit flex length to 36 inches for exposed equipment connections and 72 inches in concealed ceiling and wall cavities.
 - 2. Use PVC jacketed flex in wet locations, areas subject to washdown, and exterior locations.
- D. PVC Type II Schedule 40 may be used underground and in and under interior slabs, poured concrete walls, and where scheduled or noted in the Drawings.
 - 1. Make connections with waterproof solvent cement.
 - 2. Provide GRC at 60 degree and larger bends and where penetrating slabs.

3.3 RACEWAYS

- A. Surface metal wireways may be installed at locations to serve motor starters or other control devices where required by a multitude of wiring interconnections or physical layout.

3.4 FITTINGS

- A. Assemble metallic raceways and conduits continuous and secured to boxes, panels, etc., with appropriate fittings to maintain electrical continuity. Cut conduit joints square and reamed smooth with fittings drawn up tight.
- B. Do not use crimp-on, tap-on, indenter type, malleable iron or cast set screw fittings.

3.5 BOXES

- A. Mount boxes and outlets at nominal center line in accordance with Oregon State adopted ADA requirements.
 - 1. Coordinate locations with Owner and heights shown in the Drawings.
 - 2. Adjust heights in concrete masonry unit walls to prevent devices or finish plates from spanning masonry joints.
- B. Provide outlet boxes of code required size to accommodate wires, fittings, and devices.
 - 1. Provide multi-gang boxes as required to accept devices installed with no more than one device per gang.
 - 2. Equip metallic boxes with grounding provisions.
- C. Provide flush wall switch used with conduit systems 4 inches square, 1-1/2 inches or more deep, and with one or two-gang plaster ring mounted vertically.
 - 1. Where three or more devices are at one location, use one piece multiple gang tile box or gang box with suitable device ring.
- D. Provide wall bracket and ceiling surface mounted luminaire outlets with 4 inch octagon 1-1/2 inches deep boxes with 3/8 inch fixture stud.
 - 1. Provide wall bracket outlets with single gang opening where required to accommodate fixture canopy.
 - 2. Provide larger boxes or extension rings where quantity of wires installed requires more cubic capacity.
- E. For junction boxes installed in accessible ceiling or wall cavities or exposed in utility areas, provide boxes a minimum of 4 inches square, 1-1/2 inches deep, with appropriately marked blank cover.
- F. Provide boxes for the special systems suitable for the equipment installed. Coordinate size and type with the system supplier.
- G. Provide pull boxes where shown for installation of cable supports, or where required to limit the number of bends in any conduit to not more than three 90 degree bends. Use galvanized boxes of code required size with removable covers installed so that covers will be accessible after work is completed.

- H. Provide recessed boxes flush with finished surfaces, or not more than 1/8 inch back, level and plumb.
 - 1. Do not use long screws with spacers or shims for mounting devices.
 - 2. Do not expose wiring at outlets to combustible material.
- I. Extend covers for flush mounted boxes in finished spaces a minimum of 1/4 inch beyond the box edge to provide a finished appearance. Finish edge of cover to match cover face.
- J. Equip boxes attached to a stud in gypsum board walls with opposite side box supports equivalent to Caddy #760.
 - 1. Install drywall screw prior to finish taping.
 - 2. Use methods to attach boxes to studs that do not cause projections on the face of the stud, to prevent full length contact of gypsum board to the stud face.

3.6 PULL WIRES

- A. Install nylon pull lines in all empty conduits larger than 1 inch where routing includes 25 feet or more in length or includes 180 degrees or more in bends.
- B. Where conduits requiring pull lines are stubbed out and capped, coil a minimum of 36 inches of pull line and tape at termination of conduit for easy future access.
 - 1. Label pull lines as to conduit starting or terminations point and intended future use.

END OF SECTION

SECTION 26 0553

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Branch circuit panelboard labels.
2. Equipment identification labels.
3. Device identification labels.
4. Raceway and Box identification.
5. Systems identification.

B. Related Requirements:

1. Section 26 0500: Common Work Results for Electrical

1.2 REFERENCE STANDARDS

- A.** American Public Works Association (APWA) standards for underground electrical conduit systems.
- B.** National Electrical Code (NEC).

1.3 COORDINATION

- A.** Coordinate names, abbreviations and other designations with equipment as specified in this or other Divisions or on Drawings.

1.4 SUBMITTALS

- A.** Product Data: Provide manufacturer's standard catalog pages and data sheets for each product.
- B.** Shop Drawings: Provide schedule of items to be identified indicating proposed designations, materials, legends, and formats.

1.5 QUALITY ASSURANCE

- A. Provide products in conformance with requirements of NFPA 70 and the NEC.

PART 2 PRODUCTS

2.1 LABELS

- A. Hand-written labels are not acceptable.
- B. Pre-Printed Labels: Permanent material pre-printed with black on white, with adhesive backing; Brady, 3M, or approved equal.
- C. Laminated Plastic: 3-ply laminated plastic, black with white letters, for 208/120V equipment and red with white letters for 480/277V equipment; Lamicoid or approved equal.
- D. Clear Plastic Tape: Black 12 point Helvetica medium characters machine imprinted on clear tape; Merlin, Kroy, or approved equal.
- E. Plastic Tape: Black or red with white letters, adhesive backing, field printed with proper tool; Dymo-tape or approved equal.
- F. Wire Markers: White with black numbers, adhesive backed tape on dispenser roll; Brady, 3M, or approved equal.

PART 3 EXECUTION

3.1 GENERAL

- A. Fasten labels to equipment in secure and permanent manner. Clean all oils, dirt and any foreign materials from substrate prior to label application.
- B. Install labels at locations detailed or, where not otherwise indicated, in a location convenient for viewing without interference with operations and maintenance of equipment.
- C. Where labels are to be applied to surfaces requiring finishes, install after completion of finish application.

3.2 BRANCH CIRCUIT PANELBOARDS

- A. Label main protective devices in panels with laminated plastic labels.
- B. Indicate panel name with laminated plastic labels.
 - 1. Use plastic tape labels on the side of the panel door to indicate voltage phase and feeder source, feeder wire size, and feeder breaker or fuse size with plastic tape labels on the inside of the panel door.
- C. Provide typewritten panel directories, with protective, clear transparent covers, accurately accounting for every breaker installed including spares.
 - 1. Near completion of the Work, provide schedules in panel directories that use actual room designations assigned by name or number and not the space designation used in the Drawings.

3.3 EQUIPMENT

- A. Label all disconnect switches, motor starters, relays, contactors, and time switches indicating equipment served with plastic tape labels.
- B. Where the controlling device is remote mounted from the serving panel, include the serving panel designation and circuit number with additional plastic tape labels.

3.4 RACEWAYS AND BOXES

- A. Label pull boxes and junction boxes for systems with tape, paint, or marker pen on box cover identifying system.
 - 1. If tape is used, place in an area readily visible, at least 3 inches in length across the box, installed in a neat and workman like manner.
 - 2. Where box covers are exposed in finished areas, label inside of cover.
 - 3. Label covers with the following colors:
 - a. 480Y/277V Wiring: Orange.
 - b. 208Y/120V Wiring: Black.
 - c. Fire Alarm: Red.
 - d. Communications: Green.
 - e. Security: Blue.
- B. Label each end of pull wires left in empty conduits with tags or tape indicating location of other end of wire.

3.5 SYSTEMS

- A. Complex control circuits may utilize any combination of colors with each conductor identified throughout, using wraparound numbers or letters.
 - 1. Use the number or letters shown where the Drawings or operation and maintenance data indicate wiring identification.
- B. Label the fire alarm and communication equipment zones, controls, indicators, etc., with machine printed labels or indicators appropriate for the equipment installed as supplied or recommended by the equipment manufacturer.

3.6 EXISTING EQUIPMENT

- A. Install nylon pull lines in all empty conduits larger than 1 inch where routing includes 25 feet or more in length or includes 180 degrees or more in bends.

END OF SECTION

SECTION 26 2000

SECONDARY DISTRIBUTION SYSTEM

PART 1 GENERAL

1.1 SUMMARY

A. Section includes materials and equipment for a complete distribution system.

B. Related Sections:

1. Section 26 0500 Common Work Results for Electrical
2. Section 26 0526 Grounding and Bonding for Electrical Systems.
3. Section 26 0553 Identification for Electrical Systems, for product identification requirements.

1.2 REFERENCES

- A. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2014.
- B. NEMA PB 1 - Panelboards; National Electrical Manufacturers Association; 2011.
- C. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- D. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- E. UL 67 - Panelboards; Current Edition, Including All Revisions.

1.3 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for panelboards, enclosures, overcurrent protective devices, and other installed components and accessories.
- B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, overcurrent protective device arrangement and sizes, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.

1. Include dimensioned plan and elevation views of panelboards and adjacent equipment with all required clearances indicated.
 2. Include wiring diagrams showing all factory and field connections.
 3. Clearly indicate whether proposed short circuit current ratings are fully rated or, where acceptable, series rated systems.
 4. Include documentation of listed series ratings upon request.
- C. Source Quality Control Test Reports: Include reports for tests designated in NEMA PB 1 as routine tests.
- D. Field Quality Control Test Reports.
- E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- F. Project Record Documents: Record actual installed locations of panelboards and actual installed circuiting arrangements.
- G. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project:
1. Panel Keys: Two of each different key.
 2. Maintenance requirements for products specified in this Section.

1.4 QUALITY ASSURANCE

- A. Provide secondary distribution system that is fully rated.
- B. Regulatory Requirements:
1. Comply with the established serving utility requirements.
 2. Contact utility to obtain AIC rating for new equipment.
- C. Electrical Products: Provide products in conformance with requirements of NFPA 70.

PART 2 PRODUCTS

2.1 PANEL

- A. Siemens. All other manufacturers: submit substitution request.
- B. Front operated circuit breaker type, fully enclosed with bussing provisions for future extension.
 - 1. Provide overcurrent protection ratings as indicated.
 - 2. Provide devices capable of interrupting the fault current available.
- B. Bus Work:
 - 1. Copper, sized as indicated.
 - 2. 100 percent neutral with a maximum hot-spot temperature rise of 65 degrees C above an ambient of 40 degrees C under continuous full load current.
 - 3. Rated to withstand 65,000 A fault currents.
 - 4. Include bussing provisions for mounting future devices in all spaces called for.
 - a. Where panel configuration provides additional spaces within a section, buss these spaces to receive future devices.
 - b. Make provisions for future extension of bussing.
 - 5. Provide a copper ground bus in bottom of enclosure.
- C. Ground Bus:
 - 1. Provide a ground bus with termination capacity for the grounding conductor sized for the branch circuit equipment grounding conductors in 240/120V panels.
 - 2. Bond ground bus to the panel cabinet.

2.2 CIRCUIT BREAKERS

- A. General:
 - 1. Molded case, bolt-in thermal magnetic type.
 - 2. Provide breakers with short circuit capacity rating to withstand the maximum short circuit duty that can be expected at the breaker location in the electrical system.
 - 3. Minimum short circuit rating for any circuit breaker to be 10,000 A.I.C. for 120V and 208V breakers, and 14,000 A.I.C. for 277V and 480V breakers.

B. Main Circuit Breakers:

1. Equip panels as indicated with main circuit breakers sized as scheduled and mounted behind door at top of panel.
2. Back feeding of branch circuit breakers is not acceptable.

C. Branch Circuit Breakers:

1. Molded case, thermal magnetic type.
2. Provide breakers with short circuit capacity rating to withstand the maximum short circuit duty which can be expected at the breaker location in the electrical system.
3. Provide breakers mounted in branch panelboards of the bolt-in type.
4. Provide circuit breakers used for switching duty to be UL listed for that purpose and marked "SWD."
5. Minimum short circuit rating for any circuit breaker: 10,000 A.I.C. for 120V and 240V.

D. Branch Circuit Panels:

1. Bolt-in circuit breaker type with copper bussing.
2. Bussing that is not copper is not acceptable.
3. Fit panels with flush lift latches and locks keyed alike.

2.3 ACCESSORIES

- A. Time Clock / Switch: Intermatic ET 8215C.
- B. Accessories for External Mounted Meter: Comply with service utility requirements, including clearance requirements.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install the secondary distribution system assemblies and equipment as shown on the Drawings, parallel and square with the building lines.
- B. Neatly lace and secure feeder circuit conductors individually at maximum 2 foot intervals. Cable lugs shall not support the weight of the cables.

3.2 BRANCH PANELBOARDS

- A. Install panelboards plumb and level, located as shown In the Drawings up 6'-0" to top, unless indicated otherwise.
- B. Equip selected breakers with mechanical locking devices that may be locked in the "on" position.
 - 1. Include selected breakers serving alarm systems, fire suppression systems, communications systems and other critical loads directed.

3.3 CLOSEOUT ACTIVITIES

- 1. Deliver panel keys to the Owner at completion of the Project.

END OF SECTION

SECTION 26 2726

WIRING DEVICES AND PLATES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wall switches.
2. Device plates.
3. Surface covers.

B. Related Sections:

1. Section 26 0500: Common Work Results for Electrical

1.2 SUBMITTALS

A. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

1. Include manufacturer's Installation Instructions indicating application conditions and limitations of use required by product testing agency.
2. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

B. Field Quality Control Test Reports.

C. Closeout Submittals:

1. Project Record Documents: Record actual installed locations of wiring devices.
2. Operation and Maintenance Data:
 - a. Maintenance Materials: Furnish for Owner's use in maintenance of project.

1.3 QUALITY ASSURANCE

A. Provide products in conformance with requirements of NFPA 70.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURES

- A. Wiring Devices and Plates: Hubbell, Leviton, Pass & Seymour, or approved equal.

2.2 MATERIALS - GENERAL

- A. Wiring Devices: Specification grade, with special devices as specified and required.
- B. Provide lighting switches and duplex receptacles that have similar appearance characteristics, unless noted otherwise.

2.3 WALL SWITCHES

- A. Line Voltage Switches: 20 ampere, 277 volt, quiet type, back and side wired. Verify finish color with Owner; Hubbell 1221 series or approved equal.

2.4 PLATES

- A. Flush Finish Plates: 040 inch thick, type 302 stainless steel, brush finish.
- B. Surface Covers: Galvanized or cadmium plated steel, 1/2 inch raised industrial type with openings appropriate for device installed.
- C. Weatherproof: Standard duplex GFI receptacle. Hubbell WP26MH cover mounted horizontally with hinges up. Special purpose receptacles: Hubbell WP723D or approved equal.
- D. Identification: Identify receptacle plates with press on labels indicating serving panel and branch circuit number.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install devices and finish plates plumb with building lines.
 - 1. Unless otherwise indicated in the drawings, the centerline is 48 inches for light switches in accordance with ADA.
 - 2. For all above counter devices, verify mounting heights with Drawings.

- B. Do not install finish plates and devices until final painting is complete. Scratched or splattered finish plates and devices will be rejected.
- C. Provide weatherproof device covers on devices at all exterior locations and damp or wet label areas.

3.2 COORDINATION

- A. Coordinate locations for installation of devices with the Drawings.
- B. Coordinate with equipment installer the locations and methods of connection to devices mounted in cabinets, counters, work benches, service pedestals and similar equipment.

END OF SECTION

SECTION 28 10 00

ACCESS CONTROL AND INTRUSION DETECTION

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Door Position Switch/Contact
2. Cable and Wire

1.2 RELATED SECTIONS

- A. Contents of Division 01, General Requirements apply to this Section.

1.03 REFERENCES AND STANDARDS

- A. References and Standards as required by Division 01, General Requirements.

1.3 SUBMITTALS

- A. Submittals as required by Division 28, Electronic Safety and Security and Division 01, General Requirements.

1.4 QUALITY ASSURANCE

- A. Quality assurance as required by Division 01, General Requirements.

1.5 WARRANTY

- A. Warranty of materials and workmanship as required by Division 28, Electronic Safety and Security and Division 01, General Requirements.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Door Position Switch/Contact:

1. GE Interlogix
2. Or approved equivalent.

B. Cable and Wire:

1. West Penn Wire
2. Or approved equivalent.

2.2 DOOR POSITION SWITCH/CONTACT

- A.** Provide and install recessed door position switches designed to be compatible with and operate with the future remote access control and intrusion system, in the locations indicated.
- B.** Coordinate switch type and installation with architectural door hardware schedule and requirements.

2.3 REQUEST TO EXIT DEVICE (REX)

- A.** Provided by others; see Architectural door hardware schedule.

2.4 ELECTRIC LATCH OR STRIKE

- A.** Provided by others; see Architectural door hardware schedule.

2.5 MAGNETIC LOCK

- A.** Provided by others; see Architectural door hardware schedule.

2.6 POWER SUPPLY

- A. Provided by others; see Architectural door hardware schedule.

2.7 CABLE AND WIRE

A. Copper:

1. Power: 18 AWG, 2 pair, unshielded twisted pair.
2. RS-232: 18 AWG, 4 conductor, shielded.
3. Category 6 cabling.
4. Indicate all other wire required by manufacturer installation instructions on submittal Drawings and diagrams.
5. All cabling to be plenum rated where required.

B. Connectors:

1. Modular connector.
2. 24 V Power: Screw-down on spade lug.

PART 3 – EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

- A. This specification is to be used in conjunction with the Drawings. There may be circumstances where a device listed here is not present or required on the project Drawings.
- B. Contractor to coordinate conduit installation with the electrical contractor.
- C. Preparation:
 1. Order required parts and equipment upon notification of award of the work.
 2. Bench test equipment prior to delivery to the job site.
 3. Verify the availability of power where required. If a new source of power is required, a licensed electrician is required to install it.
 4. Arrange to obtain programming information including access times, free access times, door groups, operator levels, etc.

- D. Carefully follow the instructions in the manufacturer's Installation Manual to ensure steps have been taken to provide a reliable, easy to operate system.
- E. Perform work as indicated in the Drawings and Specifications.
- F. Install 3/4-inch conduit to designated door contacts, request-to-exit devices and electric lock at each door.
- G. Ensure minimum separation requirements are met between communications cables and power circuits.
- H. Integrate power assisted doors so that the door will not function while in secure mode.
- I. Execute adequate testing of the system to ensure proper operation.
- J. Training Requirements:
 - 1. Provide adequate training of the system users to ensure adequate understanding to prevent operating errors.
 - 2. Provide four hours of training of operational instruction and two hours of maintenance instruction. Training seminars are to be hands-on instruction held at Owner's facility.
 - 3. Provide Owner with manufacturer's operating instructions.
 - 4. Provide factory trained representatives to instruct Owner's personnel in the operation of system equipment.
 - 5. Provide Owner's Authorized Representative with training plan and training checklist two weeks before planned training according to manufacturer's instructions.
- K. Workmanship:
 - 1. Comply with highest industry standards, except when specified requirements indicate more rigid standards or more precise workmanship.
 - 2. Perform work with persons experienced and qualified to produce workmanship specified.
 - 3. Maintain quality control over suppliers and Subcontractors.
- L. Equipment Pretest: Bench test prior to delivery to job site and prior to installation. Bench test per manufacturer's installation instructions.

- M. Fire-Rated Doors and Frames: Do nothing to modify a UL rated door or frame that would void the UL label or fire rating.
- N. Grounding: Provide earth-grounding of equipment as required by equipment manufacturer. Earth ground to be connected to ground rod or approved cold water pipe. Do not use electrical or telephone ground connections as earth grounds. Do not use connections to mounting posts or building structural steel as earth grounds.
- O. Cutting and Patching: Responsible for cutting, fitting or patching that may be required to complete the work.

3.2 DOOR POSITION SWITCH/CONTACT

- A. Reference 3.01, General Installation Requirements.
- B. Install per manufacturer's instructions and recommendations.

3.3 REQUEST TO EXIT DEVICE (REX)

- A. Reference 3.01, General Installation Requirements.
- B. Install per manufacturer's instructions and recommendations.

3.4 ELECTRIC LATCH OR STRIKE

- A. Reference 3.01, General Installation Requirements.
- B. Install per manufacturer's instructions and recommendations.
- C. Provided by others; see Architectural door hardware schedule.

3.5 MAGNETIC LOCK

- A. Reference 3.01, General Installation Requirements.
- B. Install per manufacturer's instructions and recommendations.

3.6 POWER SUPPLY

- A. Reference 3.01, General Installation Requirements.
- B. Install per manufacturer's instructions and recommendations.
- C. Power to Security Equipment:
 - 1. Power equipment from 120 VAC circuit dedicated for security use, except as noted. Mark panel circuit breakers with labels worded "Security Equipment - Do Not Operate," or equivalent.
- D. Install power supplies for electric locks in central locations where they will not interfere with other operations.

3.7 CABLE AND WIRE

- A. Reference 3.01, General Installation Requirements.
- B. Install per manufacturer's instructions and recommendations.
- C. Design, layout, size and plan new wire and cable runs as required.
- D. Wire and cable from the processors to devices at each door "home-run" unless otherwise specified.
- E. Wire and cable installed in conduit, except as follows: Wire or cable, in lengths of less than 10-feet, that is "fished" within walls, ceilings and door frames.
- F. Wire and cable passing through metalwork to be sleeved by an approved grommet or bushing.
- G. Avoid splicing conductors. Make splices in junction boxes (except at equipment). Make splices with an approved crimp connection. Do not use wire nuts on any low-voltage wiring.
- H. Identify wire and cable at terminations and at every junction box. Make identification with an approved permanent label, Brady or equal.

I. Cable and Wire Terminations:

1. Identify inputs and outputs on terminal strips with permanent marking labels.
2. Neatly dress and tie all wiring. The length of conductors within enclosures to be sufficient to neatly train the conductor to the terminal point with no excess. Run wire and cable parallel or normal to walls, floors and ground.
3. Install connectors as required by equipment manufacturers.
4. Make terminations so that there is no bare conductor at the terminal. Conductor insulation to bear against the terminal or connector shoulder.
5. Do not obstruct equipment controls or indicators with wire or cable. Route wire and cable away from heat producing components such as resistors and regulators.

- J. Install the appropriate cable from the CPU to door contacts, request-to-exit devices and electric locks at each door.

END OF SECTION



Appendix

Comprehensive Lead-Based Paint Inspection

Client:

City of Portland - Parks & Recreation
1050 SW 6th Avenue, Suite 2200
Portland, Oregon 97204

Project:

Multi-Park Restroom Facilities
Pier, Cathedral, Northgate, Arbor Lodge, Kenton, Irving, Grant, Creston,
Woodstock, Essex, Berkeley, Willamette and Gabriel Parks
Portland, Oregon

G2 Project #: 10419-23

April 19, 2019

Prepared By:

G2 Consultants
16869 SW 65th Avenue, #15
Lake Oswego, Oregon 97035
www.g2ci.com
CCB #223539

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Appendix C: Performance Characteristic Sheets (PCS)

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EXECUTIVE SUMMARY

G2 Consultants (G2) was retained by City of Portland, Parks and Recreation (PPR) to conduct a comprehensive inspection for lead-based paint (LBP) at thirteen city parks located throughout Portland, Oregon. Authorization was provided by Kyle DeHart, Safety and Environmental Specialist with PPR. Fifteen total restroom facilities were inspected across the following thirteen parks: Pier, Cathedral, Northgate, Arbor Lodge, Kenton, Irving, Grant, Creston, Woodstock, Essex, Berkley, Willamette and Gabriel.

Noal Kraft (State of Oregon CCB #9151842-RA, and Oregon Health Authority #1842-Indv-R) of G2 conducted the inspections on March 21 and 22, 2019.

According to the U.S. Department of Housing and Urban Development (HUD) Guidelines, a lead reading by XRF of 1.0 milligrams per square centimeter (mg/cm²) or above is considered positive for the presence of LBP. The state of Oregon also uses an action level of 1.0 mg/cm².

Results of the inspection have determined that LBP was identified on the interior and/or exterior of the restroom facilities at eight of the thirteen parks inspected. Potential lead-containing paint (LCP) below the 1.0 mg/cm² concentration was also identified in multiple components.

Specific locations and components of the coatings that tested positive for LBP can be found in the “Inspection Findings” section of this report. Details of the locations and lead content for all of the readings can be found in and Appendix A: XRF Readings Table. Photographs of all components determined to have LBP can be found in Appendix B.

Additional details can be found in the “Conclusions and Recommended Response Actions” section of this report.

PROPERTY DESCRIPTIONS

All restroom facilities are single story structures built on a concrete slab. The construction dates ranged from 1921 to 1977. Exterior construction was predominantly brick, concrete block or wood. Interior finishes consisted of concrete or ceramic tile floors with drywall or plaster walls and ceilings. Creston and Woodstock parks both had two separate restroom facilities included within G2’s scope of work. The other eleven parks each had one restroom facility included within G2’s scope of work.

SCOPE OF SERVICES

G2 was contracted by PPR to conduct a comprehensive inspection LBP at fifteen restroom facilities across thirteen city parks located throughout Portland, Oregon.

The purpose of this comprehensive inspection for LBP is to inform PPR as to the distribution of lead at the structures prior to upcoming renovation activities. Details of the parks and facilities included in this scope of work can be found in the table below:

PARK	LOCATION	FACILITY	YEAR BUILT
Pier Park	N. Lombard St. & Bruce Ave, Portland, OR	Restroom C	1928
Cathedral Park	N. Edison St. & Pittsburgh Ave, Portland, OR	Restroom A	1977
Northgate Park	N. Geneva Ave. & Fessenden St, Portland, OR	Restroom A	1968
Arbor Lodge Park	N. Bryant St. & N. Delaware Ave, Portland, OR	Restroom A	1954
Kenton Park	8417 N. Brandon Ave, Portland, OR	Restroom A	1953
Irving Park	NE 7th Ave. & Fremont St, Portland, OR	Restroom A	1958
Grant Park	NE 33rd Ave. & US Grant Pl, Portland, OR	Restroom A	1921
Creston Park	SE 44th Ave. & Powell Blvd, Portland, OR	East & West Restrooms A & B	1927
Woodstock Park	SE 47th Ave. & Stelle St, Portland, OR	South & North Restrooms A & B	1925
Essex Park	SE 79th Ave. & Center St, Portland, OR	Restroom A	1954
Berkeley Park	SE Cesar E Chavez Blvd. & Bybee Blvd, Portland, OR	Restroom A	1960
Willamette Park	6805 SW Macadam Ave, Portland, OR	Restroom A	1970
Gabriel Park	SW 45th Ave. & Vermont St, Portland, OR	Restroom A	1955

Readings of the lead content of both interior and exterior painted surfaces were collected using an X-Ray Fluorescence (XRF) device. During the inspection, G2 performed a room by room inspection, collecting readings of each testing combination (walls, doors, windows etc.) in each room in accordance with the HUD Guidelines for conducting lead-based paint inspections. All Federal, State and City regulations governing the inspection were followed.

INSPECTION FINDINGS

The following types of components listed in the table on the following page indicated the presence of lead at or above the Environmental Protection Agency Renovation, Repair and Painting Rule (EPA RRP) and the HUD Guidelines action level. The EPA and HUD definition of “positive” LBP is lead equal to or greater than 1.0 mg/cm². Additional details including reading number, floor, substrate, side, color and lead content details are located in the XRF Readings Table found in Appendix A. Photographs of all components determined to have LBP can be found in Appendix B.

Identified Components with Lead Equal to or Greater than 1.0 mg/cm²

PARK	FACILITY	ROOM	COMPONENT	CONDITION	RESULT
Pier Park	Restroom Facility C	Exterior	Window	Poor	LBP
Pier Park	Restroom Facility C	Exterior	Door Trim	Poor	LBP
Pier Park	Restroom Facility C	Exterior	Downspout	Poor	LBP
Pier Park	Restroom Facility C	Exterior	Fascia	Intact	LBP
Pier Park	Restroom Facility C	Exterior	Soffit	Intact	LBP
Pier Park	Restroom Facility C	Exterior	Door Jamb	Intact	LBP
Pier Park	Restroom Facility C	Restroom	Wall	Intact	LBP
Pier Park	Restroom Facility C	Restroom	Ceiling	Intact	LBP
Pier Park	Restroom Facility C	Restroom	Window Trim	Intact	LBP
Pier Park	Restroom Facility C	Storage Room	Window	Intact	LBP
Pier Park	Restroom Facility C	Storage Room	Window Trim	Intact	LBP
Pier Park	Restroom Facility C	Storage Room	Door Trim	Intact	LBP
Arbor Lodge Park	Restroom Facility A	Exterior	Soffit	Intact	LBP
Arbor Lodge Park	Restroom Facility A	Exterior	Fascia	Intact	LBP
Kenton Park	Restroom Facility A	Exterior	Soffit	Intact	LBP
Kenton Park	Restroom Facility A	Exterior	Fascia	Intact	LBP
Kenton Park	Restroom Facility A	Exterior	Post	Poor	LBP
Kenton Park	Restroom Facility A	Storage Room	Ceiling	Intact	LBP
Grant Park	Restroom Facility A	Exterior	Window	Intact	LBP
Grant Park	Restroom Facility A	Exterior	Fascia	Intact	LBP
Grant Park	Restroom Facility A	Exterior	Soffit	Intact	LBP
Grant Park	Restroom Facility A	Storage Room	Wall	Intact	LBP
Grant Park	Restroom Facility A	Storage Room	Window	Intact	LBP
Creston Park	W. Restroom Facility B	Exterior	Window	Poor	LBP
Creston Park	W. Restroom Facility B	Exterior	Window Sill	Intact	LBP
Creston Park	W. Restroom Facility B	Exterior	Fascia	Intact	LBP

City of Portland - Parks & Recreation
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PARK	FACILITY	ROOM	COMPONENT	CONDITION	RESULT
Creston Park	W. Restroom Facility B	Exterior	Soffit	Intact	LBP
Creston Park	W. Restroom Facility B	Storage Room	Window	Intact	LBP
Creston Park	W. Restroom Facility B	Storage Room	Ceiling	Intact	LBP
Creston Park	W. Restroom Facility B	South Restroom	Ceiling	Intact	LBP
Creston Park	W. Restroom Facility B	South Restroom Storage	Wall	Poor	LBP
Creston Park	W. Restroom Facility B	South Restroom Storage	Ceiling	Intact	LBP
Creston Park	W. Restroom Facility B	East Restroom	Ceiling	Intact	LBP
Creston Park	E. Restroom Facility A	Exterior	Vent Frame	Poor	LBP
Creston Park	E. Restroom Facility A	Exterior	Fascia	Intact	LBP
Creston Park	E. Restroom Facility A	Exterior	Soffit	Intact	LBP
Creston Park	E. Restroom Facility A	East Restroom	Ceiling	Intact	LBP
Creston Park	E. Restroom Facility A	East Restroom	Vent Frame	Intact	LBP
Woodstock Park	S. Restroom Facility A	Exterior	Window Sill	Poor	LBP
Woodstock Park	S. Restroom Facility A	Exterior	Fascia	Poor	LBP
Woodstock Park	S. Restroom Facility A	Restroom	Window Trim	Intact	LBP
Woodstock Park	S. Restroom Facility A	Restroom	Window Sill	Intact	LBP
Woodstock Park	S. Restroom Facility A	Storage Room	Door Jamb	Intact	LBP
Woodstock Park	N. Restroom Facility B	Exterior	Fascia	Intact	LBP
Woodstock Park	N. Restroom Facility B	Storage Room	Door Jamb	Intact	LBP
Woodstock Park	N. Restroom Facility B	Storage Room	Window	Poor	LBP
Essex Park	Restroom Facility A	Exterior	Soffit	Intact	LBP
Essex Park	Restroom Facility A	Exterior	Fascia	Intact	LBP
Essex Park	Restroom Facility A	Exterior	Post	Intact	LBP
Berkeley Park	Restroom Facility A	Exterior	Soffit	Intact	LBP
Berkeley Park	Restroom Facility A	Exterior	Fascia	Intact	LBP

Readings in the table reflect those components that have LBP by definition, concentrations at or above 1 mg/cm². See the "Conclusions and Recommended Response Actions" for discussion on LCP.

CONCLUSIONS AND RECOMMENDED RESPONSE ACTIONS

G2 has determined that lead concentrations equal to or above of 1.0 mg/cm² are present on the interior and/or exterior of restroom facilities at eight of the thirteen parks inspected. Potential LCP with lead concentrations below the 1.0 mg/cm² threshold was also identified.

These components could create lead dust or lead contaminated soil hazards if the paint is turned to dust by abrasion, scraping or sanding. If conditions of intact paint surfaces become destabilized, these conditions will need to be addressed. If any construction or modernization work is done on the premises, this report should be given to the contractor(s).

At the time of the inspection, the paint films identified as being lead-based were found to be both “intact” and “poor” condition. HUD considers LBP in poor condition a lead hazard, and lead hazard reduction measures are recommended on surfaces in poor condition to minimize the potential for lead-contaminated dust. Possible lead hazard reduction measures include, but are not limited to, stabilization of the existing paint film and repainting, removal and replacement of components with LBP, abatement of LBP, or reducing potential friction and impact to surfaces with LBP.

If any construction or modernization work is done on the premises, this report should be given to the contractors. G2 recommends that contractors impacting components with LBP or LCP for renovations, repairs or painting be EPA RRP certified. Anyone impacting surfaces with the intent to abate the LBP should be a licensed lead abatement contractor. OSHA has requirements for employees working with or around LCP. It is the responsibility of the contractor to ensure compliance with all regulations

LBP is a common cause of lead poisoning in children and represents a threat to the health and welfare of the occupants. Where economically feasible, it is our recommendation that all components that tested positive, and any similar untested components, be considered lead-laden, and lead-safe procedures are incorporated into any overall renovation and maintenance strategy in order to reduce the potential for contamination and/or exposure. Safe methods include: containing any work area to prevent dispersal of lead dust and chips, wet sanding and scraping at a minimum; collecting all paint chips and debris and, properly disposing of them.

Details of the locations and lead content for all of the readings can be found in the attached XRF Readings Table in Appendix A. Photographs of all components determined to have LBP can be found in Appendix B.

If additional painted surfaces are discovered that weren’t tested as part of this inspection, or that are expected to be impacted as part of any renovation work, they should be presumed LBP until tested to show otherwise.

A risk assessment has not been conducted to evaluate potential lead hazards present at the residence and surrounding soil as part of this scope of work.

QUALIFICATIONS

Noal Kraft (State of Oregon CCB #9151842-RA, and Oregon Health Authority #1842-Indv-R) of G2 performed the LBP inspection. G2 is certified by the State of Oregon to conduct LBP activities (certification number LBPI-223539, expiration 11/16/2019). Mr. Kraft is currently State certified and licensed for lead inspections. Copies of personnel and company licenses have been provided in Appendix C.

All individuals who performed this XRF testing and visual assessment have EPA and/or state licenses as Lead Inspector/Risk Assessors and have been trained in the use, calibration and maintenance of the XRF, along with the principles of radiation safety, in accordance with the work practices of [40 CFR 745, section 227](#), for states and Native American tribal groups.

METHODOLOGY

All testing of interior and exterior surfaces was conducted utilizing a Niton X-ray fluorescence (XRF) LBP analyzer, Model XLp-300A bearing Serial #25643. The source type, cadmium-109 (Cd¹⁰⁹), was sourced on August 1, 2017. G2 followed the Performance Characteristics Sheets (PCS) for the specific X-Ray fluorescence instrument (XRF) used during the LBP evaluation of the property. The XRF PCS is presented in Appendix B. The method employed for testing painted surfaces was with an X-ray fluorescence (XRF) analyzer. The instrument was calibrated to the manufacturer's specifications and was also periodically verified against the National Institute of Standards and Testing (NIST) Standard Reference Material (SRM) 2579 lead film (1.0 mg/cm²).

The calibration of the instrument is conducted in accordance with the PCS for this instrument. These instruments are calibrated using a calibration standard block of known lead content. If for any reason the instruments do not maintain a consistent calibration reading within the manufacturer's standards for performance on the calibration block supplied by the manufacturer, manufacturer's recommendations are used to bring the instrument into calibration. If the instrument cannot be brought back into calibration, it is taken off the site and sent back to the manufacturer for repair and/or re-calibration.

Wall "A" in each room is the wall where the front entrance door opening is located (or aligned with street). Going clockwise and facing Wall "A", Wall "B" will always be to your right, Wall "C" directly to the rear and Wall "D" to the left. Doors, windows and closets may be designated as left, center or right depending on their location on the wall. Doors, windows, and closets are designated as left, center or right depending on their location on the wall.

HUD requires only painted, stained, or varnished components of structures be tested during a LBP inspection.

LIMITATIONS

G2 has performed this inspection in accordance with best industry methods and practices of the profession, and consistent with the level of care and skill ordinarily exercised by reputable

environmental consultants under similar circumstances and conditions. The observations contained within this assessment are based upon site conditions readily accessible at the time of the site inspection. No other representation, guarantee or warranty, express or implied, is included or intended in this report.

G2, and its employees, used all reasonable care to diligently assess the potential for hazardous conditions on this property related to the scope of work. However, potential hazards outside of the scope of work, and the absence of a hazardous condition being found in this assessment, does not constitute a guarantee from G2 that no other hazardous conditions are present, nor does the discovery of hazardous conditions imply that all potentially hazardous conditions have been found.

The LBP portion of the inspection was planned, developed, and implemented based on G2's professional experience in performing LBP inspections. G2 performed a room by room inspection, collecting readings of each testing combination (walls, doors, windows etc.) in each room in accordance with the HUD Guidelines for conducting lead-based paint inspections. G2 utilized state-of-the-art practices and techniques in accordance with regulatory standards while performing this inspection. A copy of personnel and company certifications has been provided in Appendix C. G2's evaluation of the painted surfaces identified during this inspection is based on conditions observed at the time of the inspection. G2 cannot be responsible for changing conditions that may alter the relative exposure risk for future changes in accepted methodology.

This report consists of a visual survey, and XRF analysis of the readily accessible areas of this building and tested components. The presence or absence of LBP or LBP hazards applies only to the tested or assessed surfaces on the date(s) of the field visit and it should be understood that conditions may change due to deterioration or maintenance. The results and material conditions noted within this report were accurate at the time of the evaluation and in no way reflect the conditions at the property after the date of the evaluation.

As with all environmental investigations, this inspection is limited to the defined scope and does not purport to set forth all hazards, nor indicate that other hazards do not exist.

If you have any questions or require any additional information, please do not hesitate to contact G2 at 888/998.4224.

Respectfully Submitted and Reviewed By:



Andrew Lutz
Project Manager
G2 Consultants



Noal Kraft, CIEC, CMC
Vice President
G2 Consultants

Appendix A:

XRF Readings Table

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2409	CALIBRATION									3.06	cps		0
2410	CALIBRATION							POSITIVE			1.1 mg/cm ²	1	0.1
2411	CALIBRATION							POSITIVE			1.1 mg/cm ²	1	0.1
2412	CALIBRATION							POSITIVE			1.1 mg/cm ²	1	0.1
2413	CALIBRATION							POSITIVE			1 mg/cm ²	1	0.1
2450	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2451	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2452	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2453	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WINDOW GRATE	METAL	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2454	NULL READING							NULL					
2455	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WINDOW SILL	CONCRETE	A	BROWN	NEGATIVE	INTACT		0.8 mg/cm ²	1	0.1
2456	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WINDOW	WOOD	A	BROWN	POSITIVE	POOR		19.7 mg/cm ²	1	15.4
2457	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WINDOW	WOOD	C	BROWN	POSITIVE	POOR		19.3 mg/cm ²	1	15
2458	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WINDOW SILL	CONCRETE	C	BROWN	NEGATIVE	INTACT		0.5 mg/cm ²	1	0.5
2459	NULL READING							NULL					
2460	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	WALL TRIM	CONCRETE	C	BROWN	NEGATIVE	INTACT		0.8 mg/cm ²	1	0.2
2461	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	DOOR	WOOD	C	BROWN	NEGATIVE	INTACT		0.6 mg/cm ²	1	0.4
2462	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	DOOR TRIM	WOOD	C	BROWN	POSITIVE	POOR		22.3 mg/cm ²	1	16.9
2463	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	DOWNSPOUT	METAL	C	BROWN	POSITIVE	POOR		4.2 mg/cm ²	1	2.7
2464	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	FASCIA	WOOD	A	BROWN	POSITIVE	INTACT		13.7 mg/cm ²	1	12.3
2465	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	SOFFIT	WOOD	A	BROWN	POSITIVE	INTACT		12.9 mg/cm ²	1	11.5
2466	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	DOOR	WOOD	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.03
2467	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	EXTERIOR	DOOR JAMB	WOOD	A	BROWN	POSITIVE	INTACT		6.1 mg/cm ²	1	4.8
2468	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	RESTROOM	WALL	CONCRETE	A	WHITE	POSITIVE	INTACT		17.4 mg/cm ²	1	15.7
2469	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	RESTROOM	WALL	CONCRETE	B	WHITE	POSITIVE	INTACT		16.5 mg/cm ²	1	12
2470	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	RESTROOM	WALL	CONCRETE	C	WHITE	POSITIVE	INTACT		16.6 mg/cm ²	1	14.7
2471	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	RESTROOM	WALL	CONCRETE	D	WHITE	POSITIVE	INTACT		19.4 mg/cm ²	1	16.9
2472	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	RESTROOM	CEILING	PLASTER	UPPER	WHITE	POSITIVE	INTACT		5.1 mg/cm ²	1	3.9
2473	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	RESTROOM	WINDOW TRIM	WOOD	B	WHITE	POSITIVE	INTACT		8 mg/cm ²	1	6
2474	NULL READING							NULL					
2475	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	RESTROOM	WINDOW	WOOD	B	WHITE	NEGATIVE	INTACT		0.5 mg/cm ²	1	0.5
2476	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	WINDOW	WOOD	A	WHITE	POSITIVE	INTACT		1.9 mg/cm ²	1	0.9
2477	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	WINDOW TRIM	WOOD	A	WHITE	POSITIVE	INTACT		2.7 mg/cm ²	1	1.5
2478	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	WALL	BRICK	A	WHITE	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2479	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	WALL	BRICK	B	WHITE	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2480	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	WALL	BRICK	C	WHITE	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2481	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	WALL	BRICK	D	WHITE	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2482	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	CEILING	PLASTER	UPPER	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2483	PIER PARK - N. LOMBARD ST. & BRUCE AVE, PORTLAND, OR	RESTROOM FACILITY C	STORAGE ROOM	DOOR TRIM	WOOD	C	WHITE	POSITIVE	INTACT		3.4 mg/cm ²	1	1.9
2484	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	A	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2485	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.03
2486	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2487	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR LEFT	WOOD	A	BLACK	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2488	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB	METAL	A	BLACK	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2489	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB RIGHT	METAL	A	BLACK	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2490	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR	WOOD	A	BLACK	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2491	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	B	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2492	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	B	GREEN	NEGATIVE	INTACT		0.5 mg/cm ²	1	0.4
2493	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	COLUMN	CONCRETE	B	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2494	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	B	GREEN	NEGATIVE	INTACT		0.01 mg/cm ²	1	0.06
2495	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR RIGHT	WOOD	B	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2496	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB RIGHT	METAL	B	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2497	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB LEFT	METAL	B	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2498	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR LEFT	WOOD	B	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2499	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	CONCRETE	A	BEIGE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2500	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	CONCRETE	B	BEIGE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2501	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	CONCRETE	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2502	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	CONCRETE	D	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2503	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	CEILING	WOOD	UPPER	BEIGE	NEGATIVE	INTACT	0.23	mg/cm ²	1	0.2
2504	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	CEILING	WOOD	UPPER	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2505	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CONCRETE	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2506	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CONCRETE	B	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2507	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CONCRETE	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2508	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CONCRETE	D	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2509	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CONCRETE	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2510	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CONCRETE	B	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2511	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CONCRETE	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2512	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CONCRETE	D	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2513	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	CEILING	WOOD	UPPER	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2514	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2515	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2516	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2517	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOWNSPOUT	METAL	C	GREEN	NEGATIVE	INTACT	0.4	mg/cm ²	1	0.5
2518	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	ROOF	METAL	C	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2519	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	COLUMN	CONCRETE	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2520	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR	WOOD	D	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2521	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB	METAL	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2522	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	MECHANICAL ROOM	WALL	CONCRETE	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2523	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	MECHANICAL ROOM	WALL	CONCRETE	B	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2524	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	MECHANICAL ROOM	WALL	CONCRETE	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2525	NULL READING							NULL					
2526	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	MECHANICAL ROOM	WALL	CONCRETE	D	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2527	NULL READING							NULL					
2528	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	MECHANICAL ROOM	CEILING	WOOD	D	BEIGE	NEGATIVE	INTACT	0.7	mg/cm ²	1	0.3
2529	CATHEDRAL PARK - N. EDISON ST. & PITTSBURGH AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	ROOF	METAL	A	GREEN	NEGATIVE	INTACT	0.17	mg/cm ²	1	0.33
2530	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR RIGHT	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2531	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB RIGHT	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2532	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2533	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CERAMIC	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2534	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR STORAGE RM	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2535	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB STORAGE RM	METAL	A	GREEN	NEGATIVE	INTACT	0.08	mg/cm ²	1	0.35
2536	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB LEFT	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2537	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR LEFT	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2538	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2539	NULL READING							NULL					
2540	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2541	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SIDING	WOOD	B	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2542	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	B	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2543	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2544	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SIDING	WOOD	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2545	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2546	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR	WOOD	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2547	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB	METAL	C	GREEN	NEGATIVE	INTACT	0.09	mg/cm ²	1	0.21
2548	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	D	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2549	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SIDING	WOOD	D	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2550	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	WOOD	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2551	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	CONCRETE	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2552	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	CONCRETE	B	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2553	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	CONCRETE	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2554	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	CONCRETE	D	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2555	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	CEILING	CONCRETE	UPPER	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2556	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	SHELF	WOOD	B	GREEN	NEGATIVE	POOR	0.08	mg/cm ²	1	0.15
2557	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
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XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2558	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.12
2559	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2560	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.1
2561	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2562	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2563	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2564	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2565	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT	0.5	mg/cm ²	1	0.2
2566	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	NORHT STORAGE ROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2567	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	NORHT STORAGE ROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2568	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	NORHT STORAGE ROOM	WALL	WOOD	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2569	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	NORHT STORAGE ROOM	WALL	WOOD	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2570	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	NORHT STORAGE ROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0.4	mg/cm ²	1	0.2
2571	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
2572	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2573	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
2574	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.1
2575	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2576	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2577	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2578	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2579	NORTHGATE PARK - N. GENEVA AVE. & FESSENDEN ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0.6	mg/cm ²	1	0.3
2580	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CERAMIC	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2581	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	A	GREEN	POSITIVE	INTACT	2.5	mg/cm ²	1	1.1
2582	NULL READING							NULL					
2583	NULL READING							NULL					
2584	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2585	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	POST	METAL	A	BLACK	NEGATIVE	POOR	0.09	mg/cm ²	1	0.37
2586	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	PLASTER	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2587	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2588	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2589	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	PLASTER	B	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2590	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	B	GREEN	POSITIVE	INTACT	2.2	mg/cm ²	1	1.1
2591	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	B	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2592	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	METAL	B	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2593	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2594	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	PLASTER	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2595	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2596	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	C	YELLOW	POSITIVE	INTACT	1.8	mg/cm ²	1	0.8
2597	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	D	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2598	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	PLASTER	D	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2599	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2600	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0.04	mg/cm ²	1	0.17
2601	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2602	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2603	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.19
2604	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2605	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.07
2606	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	DRYWALL	A	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2607	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	DRYWALL	B	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2608	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	DRYWALL	C	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2609	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	DRYWALL	D	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2610	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	CEILING	DRYWALL	UPPER	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2611	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	CEILING	DRYWALL	UPPER	BEIGE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2612	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02

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READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2613	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2614	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.03
2615	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.03
2616	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT		0.01 mg/cm ²	1	0.06
2617	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.03
2618	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2619	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2620	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2621	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2622	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	WALL	CONCRETE	A	YELLOW	NEGATIVE	INTACT		0.22 mg/cm ²	1	0.74
2623	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	WALL	WOOD	B	YELLOW	NEGATIVE	INTACT		0 mg/cm ²	1	0.03
2624	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	WALL	WOOD	C	YELLOW	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2625	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	WALL	CONCRETE	D	YELLOW	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2626	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	SHELF	WOOD	C	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2627	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2628	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT		0.01 mg/cm ²	1	0.04
2629	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST STORAGE ROOM	DOOR JAMB	WOOD	A	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2630	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2631	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	DOOR	WOOD	D	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2632	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2633	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT		0.4 mg/cm ²	1	0.6
2634	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2635	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT		0.01 mg/cm ²	1	0.05
2636	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2637	ARBOR LODGE PARK - N. BRYANT ST. & N. DELAWARE AVE, PORTLAND, OR	RESTROOM FACILITY A	WEST STORAGE ROOM	WINDOW	METAL	B	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2638	CALIBRATION							POSITIVE			1.1 mg/cm ²	1	0.1
2639	CALIBRATION							POSITIVE			1 mg/cm ²	1	0.1
2640	CALIBRATION							POSITIVE			1 mg/cm ²	1	0.1
2641	CALIBRATION										3.27 cps		0
2642	CALIBRATION							POSITIVE			1 mg/cm ²	1	0.1
2643	CALIBRATION							POSITIVE			1.1 mg/cm ²	1	0.1
2644	CALIBRATION							POSITIVE			1.1 mg/cm ²	1	0.1
2645	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2646	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	A	BROWN	POSITIVE	INTACT		4.7 mg/cm ²	1	3.4
2647	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	BROWN	POSITIVE	INTACT		4.1 mg/cm ²	1	2.8
2648	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	POST	METAL	A	BROWN	POSITIVE	POOR		3.9 mg/cm ²	1	2.5
2649	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT		0.01 mg/cm ²	1	0.03
2650	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	B	BROWN	POSITIVE	POOR		3.9 mg/cm ²	1	2
2651	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	B	BROWN	POSITIVE	INTACT		4.3 mg/cm ²	1	3.1
2652	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2653	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL GRATE	METAL	C	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2654	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	POST	METAL	C	BROWN	POSITIVE	POOR		1.5 mg/cm ²	1	0.3
2655	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2656	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL GRATE	METAL	D	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2657	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	DOOR	WOOD	D	BROWN	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2658	NULL READING							NULL					
2659	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	DOOR TRIM	WOOD	D	BROWN	NEGATIVE	INTACT		0.07 mg/cm ²	1	0.25
2660	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	DOOR TRIM	WOOD	D	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2661	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2662	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2663	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2664	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2665	NULL READING							NULL					
2666	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	PARTITION	PLASTIC	D	GREEN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2667	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	FLOOR	CONCRETE	LOWER	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2668	NULL READING							NULL					
2669	NULL READING							NULL					
2670	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR	WOOD	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2671	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR JAMB	WOOD	B	BROWN	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.09
2672	NULL READING							NULL					
2673	NULL READING							NULL					
2674	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	B	YELLOW	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.07
2675	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	B	YELLOW	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.05
2676	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	C	YELLOW	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
2677	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0.06	mg/cm ²	1	0.13
2678	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0.04	mg/cm ²	1	0.88
2679	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	FLOOR	CONCRETE	LOWER	GRAY	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2680	NULL READING							NULL					
2681	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	CEILING	WOOD	UPPER	WHITE	POSITIVE	INTACT	1.6	mg/cm ²	1	0.5
2682	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	DOOR	WOOD	B	BROWN	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
2683	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	DOOR TRIM	WOOD	B	BROWN	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2684	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	DOOR JAMB	WOOD	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2685	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	FLOOR	CONCRETE	LOWER	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2686	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2687	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	0.12	mg/cm ²	1	0.21
2688	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2689	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2690	KENTON PARK - 8417 N. BRANDON AVE, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	PARTITION	PLASTIC	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2691	NULL READING							NULL					
2692	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CERAMIC	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2693	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	CONCRETE	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2694	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	METAL	A	BLACK	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2695	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	PLASTER	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2696	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CERAMIC	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2697	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	PLASTER	C	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2698	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	METAL	C	BLACK	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2699	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	CONCRETE	C	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2700	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOWNSPOUT	METAL	C	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2701	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	PLASTER	D	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2702	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	DOOR	WOOD	C	BLACK	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.11
2703	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	DOOR JAMB	METAL	C	BLACK	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2704	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	BRICK	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2705	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	BRICK	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2706	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	BRICK	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2707	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH STORAGE ROOM	WALL	BRICK	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2708	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2709	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2710	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	WOOD	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2711	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	BRICK	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2712	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	BRICK	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2713	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WALL	BRICK	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2714	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2715	NULL READING							NULL					
2716	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH STORAGE ROOM	WINDOW	METAL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2717	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2718	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2719	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
2720	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.13

City of Portland - Portland Parks and Recreation
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April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2721	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.1
2722	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2723	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2724	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2725	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2726	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2727	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0.04	mg/cm ²	1	0.11
2728	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WINDOW	METAL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2729	NULL READING							NULL					
2730	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2731	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2732	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
2733	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2734	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
2735	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.07
2736	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2737	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2738	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2739	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2740	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.05	mg/cm ²	1	0.22
2741	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.12
2742	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.09
2743	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2744	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2745	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2746	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2747	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0.05	mg/cm ²	1	0.14
2748	IRVING PARK - NE 7th AVE. & FREMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WINDOW	METAL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2749	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2750	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2751	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2752	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2753	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	WOOD	D	GREEN	POSITIVE	INTACT	24.7	mg/cm ²	1	17.7
2754	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	WOOD	B	GREEN	POSITIVE	INTACT	3.1	mg/cm ²	1	2.1
2755	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	CONCRETE	B	GREEN	NEGATIVE	INTACT	0.1	mg/cm ²	1	0.05
2756	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	CONCRETE	C	GREEN	NEGATIVE	INTACT	0.15	mg/cm ²	1	0.08
2757	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	CONCRETE	D	GREEN	NEGATIVE	INTACT	0.27	mg/cm ²	1	0.19
2758	NULL READING							NULL					
2759	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	CONCRETE	A	GREEN	NEGATIVE	INTACT	0.2	mg/cm ²	1	0.1
2760	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	GREEN	POSITIVE	INTACT	23	mg/cm ²	1	16.9
2761	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	A	GREEN	POSITIVE	INTACT	24.8	mg/cm ²	1	17.4
2762	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2763	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2764	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2765	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.05	mg/cm ²	1	0.24
2766	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
2767	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2768	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2769	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2770	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2771	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2772	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	WEST RESTROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2773	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2774	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	DOOR JAMB	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2775	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.1
2776	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2777	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
2778	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.11
2779	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2780	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2781	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2782	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2783	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	EAST RESTROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2784	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR	WOOD	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2785	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR JAMB	METAL	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2786	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	WOOD	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2787	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	B	WHITE	POSITIVE	INTACT	24.8	mg/cm ²	1	18.1
2788	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	C	WHITE	POSITIVE	INTACT	17.4	mg/cm ²	1	12.9
2789	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	BRICK	D	WHITE	NEGATIVE	INTACT	0.5	mg/cm ²	1	0.1
2790	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	CEILING	DRYWALL	LOWER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2791	GRANT PARK - NE 33rd AVE. & US GRANT PL, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WINDOW	WOOD	B	WHITE	POSITIVE	INTACT	14	mg/cm ²	1	9.9
2792	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2793	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2794	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2795	NULL READING							NULL					
2796	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2797	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	WINDOW	WOOD	D	BROWN	POSITIVE	POOR	21.1	mg/cm ²	1	15.6
2798	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	WINDOW SILL	CONCRETE	D	BROWN	POSITIVE	INTACT	3.8	mg/cm ²	1	2.4
2799	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	FASCIA	WOOD	A	BROWN	POSITIVE	INTACT	17.9	mg/cm ²	1	14
2800	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EXTERIOR	SOFFIT	WOOD	A	BROWN	POSITIVE	INTACT	18.3	mg/cm ²	1	14.9
2801	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	STORAGE ROOM	DOOR	WOOD	C	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2802	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	STORAGE ROOM	DOOR TRIM	WOOD	C	BROWN	NEGATIVE	INTACT	0.26	mg/cm ²	1	0.3
2803	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	STORAGE ROOM	WINDOW	WOOD	D	WHITE	POSITIVE	INTACT	3.6	mg/cm ²	1	2.2
2804	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	STORAGE ROOM	CEILING	WOOD	UPPER	WHITE	POSITIVE	INTACT	18.4	mg/cm ²	1	14.2
2805	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.06	mg/cm ²	1	0.09
2806	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2807	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2808	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2809	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM	CEILING	DRYWALL	UPPER	WHITE	POSITIVE	INTACT	2.1	mg/cm ²	1	1
2810	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM	DOOR	WOOD	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2811	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM	DOOR JAMB	METAL	A	BROWN	NEGATIVE	INTACT	0.11	mg/cm ²	1	0.16
2812	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	FLOOR	CONCRETE	LOWER	RED	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2813	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	FLOOR	CONCRETE	LOWER	RED	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2814	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	DOOR	WOOD	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2815	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	DOOR JAMB	METAL	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2816	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2817	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	WALL	PLASTER	B	WHITE	POSITIVE	POOR	20.9	mg/cm ²	1	16.7
2818	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	WALL	PLASTER	C	WHITE	POSITIVE	POOR	17.8	mg/cm ²	1	12.2
2819	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2820	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	SOUTH RESTROOM STORAGE	CEILING	DRYWALL	UPPER	WHITE	POSITIVE	INTACT	15.3	mg/cm ²	1	14
2821	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	CEILING	DRYWALL	UPPER	WHITE	POSITIVE	INTACT	1.7	mg/cm ²	1	0.6
2822	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	DOOR	WOOD	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2823	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	DOOR JAMB	METAL	D	BROWN	NEGATIVE	INTACT	0.08	mg/cm ²	1	0.15
2824	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.02
2825	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2826	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
2827	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2828	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	FLOOR	CONCRETE	LOWER	RED	NEGATIVE	POOR	0	mg/cm ²	1	0.02

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2829	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	EAST RESTROOM	VENTS	METAL	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2830	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	RESTROOM ENTRY	DOOR	WOOD	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2831	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	WEST RESTROOM FACILITY B	RESTROOM ENTRY	DOOR JAMB	WOOD	A	BROWN	NEGATIVE	INTACT		0.25 mg/cm ²	1	0.41
2832	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2833	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2834	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2835	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2836	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WINDOW GRATE	METAL	D	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2837	NULL READING							NULL					
2838	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	METAL	D	BROWN	NEGATIVE	INTACT		0.6 mg/cm ²	1	0.2
2839	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	CONCRETE	A	BROWN	NEGATIVE	INTACT		0.26 mg/cm ²	1	0.08
2840	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WINDOW GRATE	METAL	A	BROWN	NEGATIVE	INTACT		0.02 mg/cm ²	1	0.1
2841	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	VENT FRAME	WOOD	B	BROWN	POSITIVE	POOR		21.5 mg/cm ²	1	16.4
2842	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	VENT	METAL	B	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2843	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR							NULL					
2844	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	CONCRETE	B	BROWN	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2845	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	CONCRETE	C	BROWN	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2846	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	BROWN	POSITIVE	INTACT		17.3 mg/cm ²	1	13.8
2847	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	A	BROWN	POSITIVE	INTACT		22.4 mg/cm ²	1	16.4
2848	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	DOOR	WOOD	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2849	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	DOOR JAMB	METAL	A	BROWN	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2850	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2851	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2852	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT		0.04 mg/cm ²	1	0.06
2853	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2854	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	FLOOR	CONCRETE	LOWER	RED	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2855	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	WEST RESTROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2856	NULL READING							NULL					
2857	NULL READING							NULL					
2858	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	CEILING	DRYWALL	UPPER	WHITE	POSITIVE	INTACT		1.5 mg/cm ²	1	0.5
2859	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	DOOR	WOOD	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2860	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	DOOR JAMB	METAL	A	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2861	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2862	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT		0.08 mg/cm ²	1	0.08
2863	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2864	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2865	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	FLOOR	CONCRETE	LOWER	RED	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2866	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	EAST RESTROOM	VENT FRAME	WOOD	B	BROWN	POSITIVE	INTACT		22.9 mg/cm ²	1	17.5
2867	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	DOOR	WOOD	B	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2868	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	DOOR JAMB	WOOD	C	BROWN	NEGATIVE	INTACT		0.25 mg/cm ²	1	0.37
2869	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2870	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2871	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	WALL	PLASTER	C	WHITE	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2872	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	WALL	PLASTER	D	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2873	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	FLOOR	CONCRETE	LOWER	RED	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2874	CRESTON PARK - SE 44th AVE. & POWELL BLVD, PORTLAND, OR	EAST RESTROOM FACILITY A	STORAGE ROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2875	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT		0.01 mg/cm ²	1	0.02
2876	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2877	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT		0.01 mg/cm ²	1	0.05
2878	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT		0 mg/cm ²	1	0.02
2879	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	WINDOW	WOOD	D	GREEN	NEGATIVE	POOR		0 mg/cm ²	1	0.02
2880	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	WOOD	D	GREEN	NEGATIVE	POOR		0.02 mg/cm ²	1	0.12
2881	NULL READING							NULL					
2882	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	WOOD	B	GREEN	POSITIVE	POOR		3.1 mg/cm ²	1	2

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2883	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	B	GREEN	POSITIVE	POOR	6.9	mg/cm ²	1	5
2884	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	DOOR	WOOD	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2885	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	DOOR JAMB	METAL	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2886	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	WALL	BRICK	A	WHITE	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.07
2887	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	WALL	BRICK	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2888	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2889	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2890	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	WINDOW TRIM	WOOD	B	WHITE	POSITIVE	INTACT	5	mg/cm ²	1	3.2
2891	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	WINDOW SILL	WOOD	B	WHITE	POSITIVE	INTACT	6.5	mg/cm ²	1	3.5
2892	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	RESTROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2893	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	DOOR	WOOD	C	BROWN	NEGATIVE	POOR	0.5	mg/cm ²	1	0.3
2894	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	DOOR JAMB	WOOD	C	GREEN	POSITIVE	INTACT	6.4	mg/cm ²	1	5.2
2895	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	WALL	BRICK	A	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.03
2896	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	WALL	BRICK	B	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.02
2897	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	WALL	BRICK	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2898	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	WALL	BRICK	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2899	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	WINDOW	WOOD	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2900	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	WINDOW TRIM	WOOD	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.07
2901	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	CEILING	PLASTER	UPPER	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2902	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	SOUTH RESTROOM FACILITY A	STORAGE ROOM	CEILING	PLASTER	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2903	NULL READING							NULL					
2904	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT	0.1	mg/cm ²	1	0.11
2905	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2906	NULL READING							NULL					
2907	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2908	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT	0.07	mg/cm ²	1	0.05
2909	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	FASCIA	WOOD	A	GREEN	POSITIVE	INTACT	7.1	mg/cm ²	1	6
2910	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	VENT	WOOD	C	GREEN	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
2911	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	VENT	WOOD	C	GREEN	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
2912	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	WINDOW BOARDED OVER	WOOD	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2913	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EXTERIOR	WINDOW BOARDED OVER	WOOD	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2914	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	STORAGE ROOM	DOOR	WOOD	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2915	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	STORAGE ROOM	DOOR JAMB	WOOD	D	GREEN	POSITIVE	INTACT	6.8	mg/cm ²	1	4.9
2916	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	STORAGE ROOM	WINDOW	WOOD	C	GREEN	POSITIVE	POOR	5.6	mg/cm ²	1	4.2
2917	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	STORAGE ROOM	CEILING	PLASTER	UPPER	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.06
2918	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	STORAGE ROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2919	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EAST RESTROOM	DOOR	WOOD	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2920	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EAST RESTROOM	DOOR JAMB	METAL	A	RED	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2921	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EAST RESTROOM	WALL	BRICK	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2922	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EAST RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2923	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EAST RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2924	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EAST RESTROOM	WALL	BRICK	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2925	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	EAST RESTROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2926	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	WEST RESTROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2927	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	WEST RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2928	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	WEST RESTROOM	DOOR JAMB	METAL	A	RED	NEGATIVE	POOR	0	mg/cm ²	1	0.02
2929	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	WEST RESTROOM	WALL	BRICK	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2930	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	WEST RESTROOM	WALL	BRICK	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2931	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	WEST RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2932	WOODSTOCK PARK - SE 47th AVE. & STELLE ST, PORTLAND, OR	NORTH RESTROOM FACILITY B	WEST RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2933	CALIBRATION							POSITIVE		1.1	mg/cm ²	1	0.1
2934	CALIBRATION							POSITIVE		1	mg/cm ²	1	0.1
2935	CALIBRATION							POSITIVE		1	mg/cm ²	1	0.1
2936	CALIBRATION									3.16	cps		0

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
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XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2937	CALIBRATION							POSITIVE		1.1	mg/cm ²	1	0.1
2938	CALIBRATION							POSITIVE		1	mg/cm ²	1	0.1
2939	CALIBRATION							POSITIVE		1.1	mg/cm ²	1	0.1
2940	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	A	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2941	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	B	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2942	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	C	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2943	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	D	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2944	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	METAL	D	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2945	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW SILL	WOOD	D	MULTI	NEGATIVE	INTACT	0.8	mg/cm ²	1	0.2
2946	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	D	GREEN	POSITIVE	INTACT	2.8	mg/cm ²	1	1.7
2947	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	D	GREEN	POSITIVE	INTACT	2.4	mg/cm ²	1	1
2948	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	POST	METAL	A	SILVER	POSITIVE	INTACT	3.9	mg/cm ²	1	2.9
2949	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	B	GREEN	POSITIVE	INTACT	3.4	mg/cm ²	1	2.3
2950	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	B	GREEN	POSITIVE	INTACT	3.2	mg/cm ²	1	2.1
2951	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR	WOOD	B	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2952	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB	METAL	B	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2953	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB	METAL	A	MULTI	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
2954	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR	WOOD	A	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2955	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR	WOOD	C	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2956	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOOR JAMB	METAL	C	MULTI	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2957	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW GRATE	METAL	C	SILVER	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2958	NULL READING							NULL					
2959	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	POST	METAL	C	SILVER	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2960	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2961	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2962	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2963	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2964	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2965	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WINDOW	WOOD	C	WHITE	NEGATIVE	INTACT	0.06	mg/cm ²	1	0.3
2966	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2967	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	CEILING	DRYWALL	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2968	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2969	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2970	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2971	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2972	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2973	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WINDOW	WOOD	D	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2974	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	FLOOR	CONCRETE	LOWER	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2975	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	A	MULTI	NEGATIVE	INTACT	0.22	mg/cm ²	1	0.31
2976	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	B	MULTI	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
2977	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	C	MULTI	NEGATIVE	INTACT	0.23	mg/cm ²	1	0.17
2978	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	D	MULTI	NEGATIVE	INTACT	0.24	mg/cm ²	1	0.29
2979	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WINDOW	WOOD	C	MULTI	NEGATIVE	INTACT	0.26	mg/cm ²	1	0.3
2980	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	SHELF	WOOD	B	MULTI	NEGATIVE	INTACT	0.7	mg/cm ²	1	0.2
2981	ESSEX PARK - SE 79th AVE. & CENTER ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0.3	mg/cm ²	1	0.22
2982	NULL READING							NULL					
2983	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2984	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2985	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	C	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2986	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	BRICK	D	BROWN	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
2987	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	D	BROWN	POSITIVE	INTACT	4.3	mg/cm ²	1	2.9
2988	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	D	BROWN	POSITIVE	INTACT	4.3	mg/cm ²	1	3.1
2989	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	METAL	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2990	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	POST	METAL	A	BROWN	NEGATIVE	INTACT	0.4	mg/cm ²	1	0.6

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
2991	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOWNSPOUT	METAL	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2992	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WINDOW	METAL	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2993	NULL READING							NULL					
2994	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	B	BROWN	POSITIVE	INTACT	2.3	mg/cm ²	1	1.2
2995	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	B	BROWN	POSITIVE	INTACT	4	mg/cm ²	1	2.6
2996	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	POST	METAL	C	BROWN	NEGATIVE	INTACT	0.14	mg/cm ²	1	0.31
2997	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	DOOR	WOOD	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
2998	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	DOOR JAMB	METAL	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
2999	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	BRICK	A	WHITE	NEGATIVE	INTACT	0.24	mg/cm ²	1	0.29
3000	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0.22	mg/cm ²	1	0.28
3001	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
3002	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
3003	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0.08	mg/cm ²	1	0.15
3004	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	WINDOW	METAL	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3005	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	WOMEN'S RESTROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0.4	mg/cm ²	1	0.4
3006	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0.6	mg/cm ²	1	0.3
3007	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR	WOOD	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3008	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR JAMB	METAL	D	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3009	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0.05	mg/cm ²	1	0.18
3010	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
3011	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0.05	mg/cm ²	1	0.09
3012	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
3013	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WINDOW	METAL	A	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3014	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	SHELF	WOOD	D	WHITE	NEGATIVE	POOR	0.06	mg/cm ²	1	0.1
3015	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	DOOR	WOOD	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
3016	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	DOOR JAMB	METAL	B	BROWN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3017	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
3018	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
3019	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
3020	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0.1	mg/cm ²	1	0.84
3021	BERKELY PARK - SE CESAR E CHAVEZ BLVD. & BYBEE BLVD, PORTLAND, OR	RESTROOM FACILITY A	MEN'S RESTROOM	CEILING	WOOD	UPPER	WHITE	NEGATIVE	INTACT	0.28	mg/cm ²	1	0.69
3022	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	WOOD	A	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3023	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	WOOD	B	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3024	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	WOOD	C	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3025	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	WOOD	D	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
3026	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3027	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	DOOR	WOOD	B	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
3028	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	DOOR JAMB	METAL	B	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3029	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
3030	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	CERAMIC	B	BLUE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
3031	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.1
3032	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.13
3033	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3034	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3035	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3036	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHWEST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3037	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3038	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3039	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3040	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3041	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.06
3042	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	CERAMIC	B	BLUE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
3043	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	CERAMIC	C	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3044	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.04

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
3045	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	DOOR	WOOD	D	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
3046	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	NORTHEAST RESTROOM	DOOR JAMB	METAL	D	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3047	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	DOOR JAMB	METAL	C	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3048	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	DOOR	WOOD	C	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
3049	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.07
3050	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.06
3051	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.06
3052	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.04
3053	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3054	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3055	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3056	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHWEST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3057	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3058	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3059	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3060	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3061	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
3062	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	CERAMIC	A	BLUE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.05
3063	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	CERAMIC	B	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3064	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	WALL	CERAMIC	C	BLUE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.1
3065	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	DOOR	WOOD	B	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3066	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	SOUTHEAST RESTROOM	DOOR JAMB	METAL	B	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3067	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR JAMB	METAL	C	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3068	WILLAMETTE PARK - 6805 SW MACADAM AVE, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR	WOOD	C	BLUE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
3069	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	A	GREEN	NEGATIVE	INTACT	0.12	mg/cm ²	1	0.27
3070	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	B	GREEN	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
3071	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	C	GREEN	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
3072	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	WALL	CONCRETE	D	GREEN	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.08
3073	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOWNSPOUT	METAL	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3074	NULL READING							NULL					
3075	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	DOWNSPOUT	METAL	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3076	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3077	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3078	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	GUTTER	METAL	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3079	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	B	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3080	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SIDING	WOOD	B	YELLOW	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.07
3081	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	C	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3082	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SOFFIT	WOOD	C	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3083	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	D	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3084	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	FASCIA	WOOD	D	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3085	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	EXTERIOR	SIDING	WOOD	D	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3086	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR	WOOD	C	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3087	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	DOOR JAMB	CONCRETE	C	RED	NEGATIVE	POOR	0.2	mg/cm ²	1	0.31
3088	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.07
3089	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	<LOD	mg/cm ²	1	0
3090	NULL READING							NULL					
3091	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	POOR	0.11	mg/cm ²	1	0.05
3092	NULL READING							NULL					
3093	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	WALL	CONCRETE	D	BLUE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3094	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	CEILING	CONCRETE	UPPER	RED	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3095	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	STORAGE ROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.04
3096	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0.05	mg/cm ²	1	0.08
3097	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3098	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	DOOR JAMB	METAL	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02

City of Portland - Portland Parks and Recreation
Comprehensive Lead-Based Paint Inspection
Multi-Park Restroom Facilities
XRF Reading Table
April 19, 2019

READING NO.	SITE/ADDRESS	FACILITY	ROOM	COMPONENT	SUBSTRATE	SIDE	COLOR	RESULTS	CONDITION	PbC	UNITS	ACTION LEVEL	PbC ERROR
3099	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
3100	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.07
3101	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.07
3102	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.11
3103	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	DRYWALL	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3104	NULL READING							NULL					
3105	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3106	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3107	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	WALL	CONCRETE	D	WHITE	NEGATIVE	INTACT	0.12	mg/cm ²	1	0.29
3108	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	SOUTH RESTROOM	FLOOR	CERAMIC	LOWER	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3109	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	FLOOR	CERAMIC	LOWER	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3110	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3111	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	DOOR JAMB	METAL	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3112	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.08
3113	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0.02	mg/cm ²	1	0.12
3114	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.03
3115	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.06
3116	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3117	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	DRYWALL	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3118	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	DRYWALL	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3119	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3120	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	MIDDLE RESTROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3121	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	CEILING	CONCRETE	UPPER	WHITE	NEGATIVE	INTACT	0.05	mg/cm ²	1	0.12
3122	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	DOOR	WOOD	A	GREEN	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3123	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	DOOR JAMB	METAL	A	YELLOW	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3124	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	A	WHITE	NEGATIVE	INTACT	0.03	mg/cm ²	1	0.15
3125	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3126	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	C	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.03
3127	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CERAMIC	D	WHITE	NEGATIVE	INTACT	0.01	mg/cm ²	1	0.04
3128	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CONCRETE	A	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3129	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CONCRETE	B	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3130	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	CONCRETE	C	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3131	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	WALL	DRYWALL	D	WHITE	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3132	GABRIAL PARK - SW 45th AVE. & VERMONT ST, PORTLAND, OR	RESTROOM FACILITY A	NORTH RESTROOM	FLOOR	CERAMIC	LOWER	GRAY	NEGATIVE	INTACT	0	mg/cm ²	1	0.02
3133	NULL READING							NULL					
3134	CALIBRATION							POSITIVE		1.1	mg/cm ²	1	0.1
3135	CALIBRATION							POSITIVE		1	mg/cm ²	1	0.1
3136	CALIBRATION							POSITIVE		1.1	mg/cm ²	1	0.1

Appendix B:

Photographs of Positive Components



Pier Park: Exterior, Window



Pier Park: Exterior, Door Trim



Pier Park: Exterior, Downspout



Pier Park: Exterior, Fascia



Pier Park: Exterior, Soffit



Pier Park: Exterior, Door Jamb



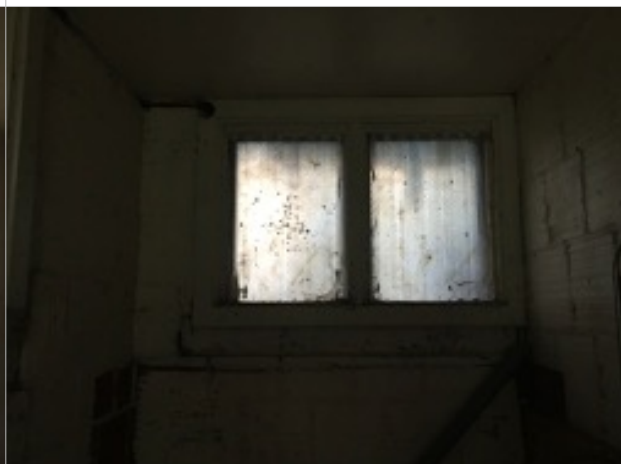
Pier Park: Restroom, Wall



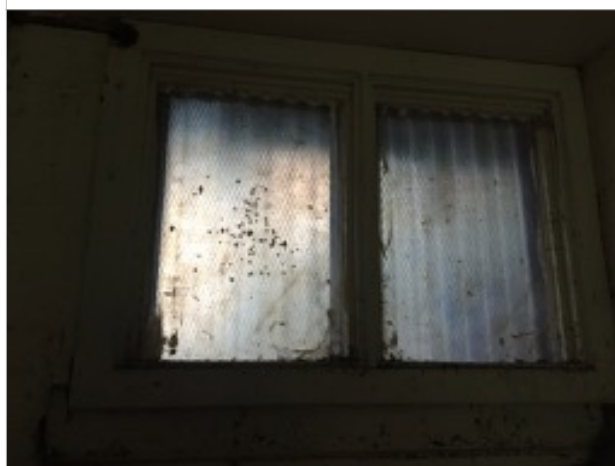
Pier Park: Restroom, Ceiling



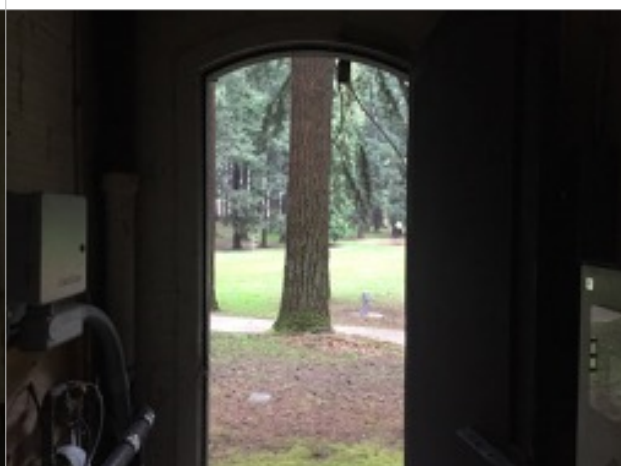
Pier Park: Restroom, Window Trim



Pier Park: Storage Room, Window



Pier Park: Storage Room, Window Trim



Pier Park: Storage Room, Door Trim



Arbor Lodge Park: Exterior, Soffit



Arbor Lodge Park: Exterior, Fascia



Kenton Park: Exterior, Soffit



Kenton Park: Exterior, Fascia



Kenton Park: Exterior, Post



Kenton Park: Storage Room, Ceiling



Grant Park: Exterior, Window



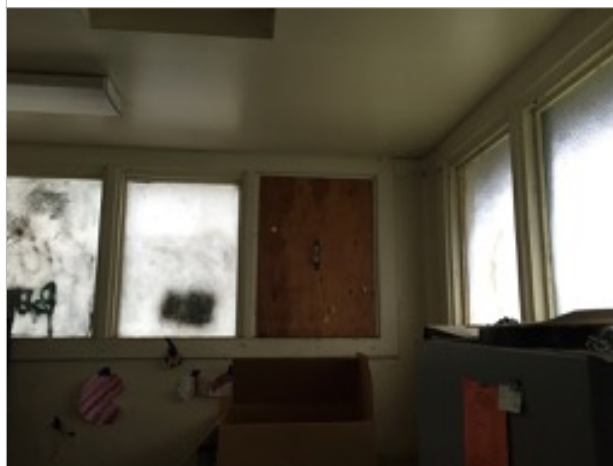
Grant Park: Exterior, Fascia



Grant Park: Exterior, Soffit



Grant Park: Storage Room, Wall



Grant Park: Storage Room, Window



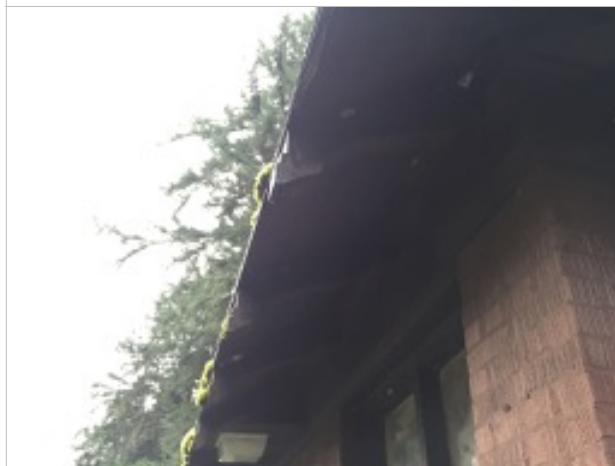
Creston Park West: Exterior, Window



Creston Park West: Exterior, Window Sill



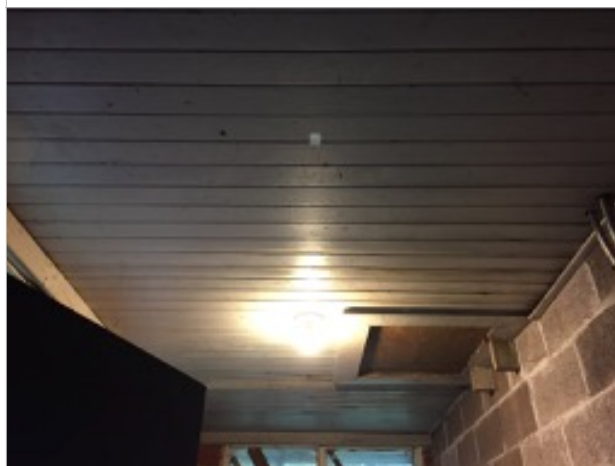
Creston Park West: Exterior, Fascia



Creston Park West: Exterior, Soffit



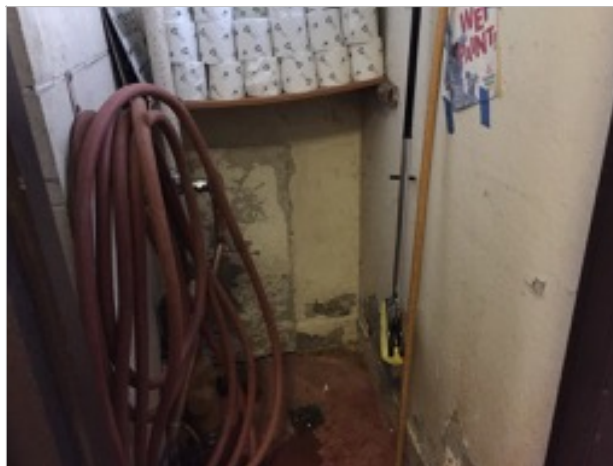
Creston Park West: Storage Room, Window



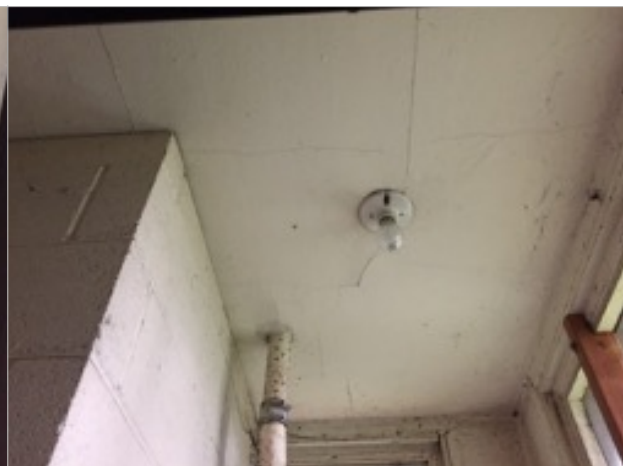
Creston Park West: Storage Room, Ceiling



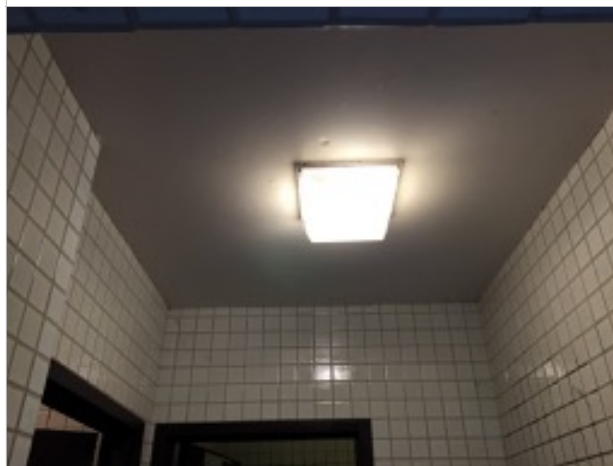
Creston Park West: South Restroom, Ceiling



Creston Park West: South Restroom Storage, Wall



Creston Park West: South Restroom Storage, Ceiling



Creston Park West: East Restroom, Ceiling



Creston Park East: Exterior, Vent Frame



Creston Park East: Exterior, Fascia



Creston Park East: Exterior, Soffit



Creston Park East: East Restroom, Ceiling



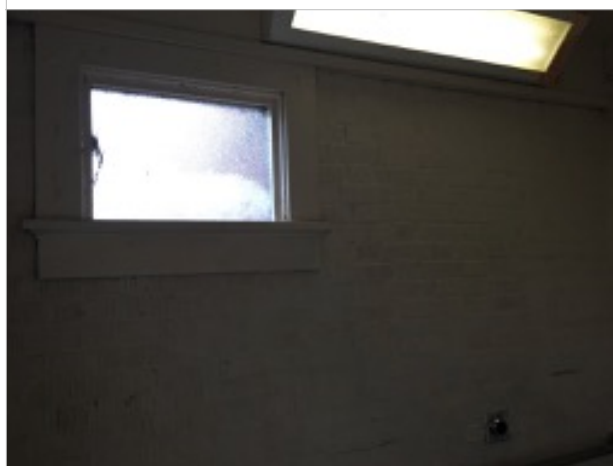
Creston Park East: East Restroom, Vent Frame



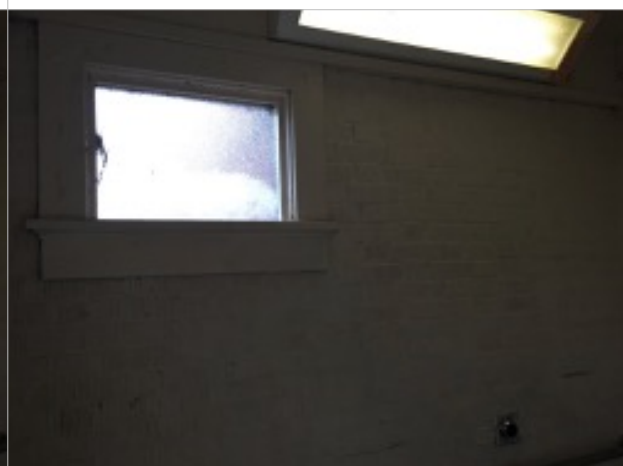
Woodstock Park South: Exterior, Window Sill



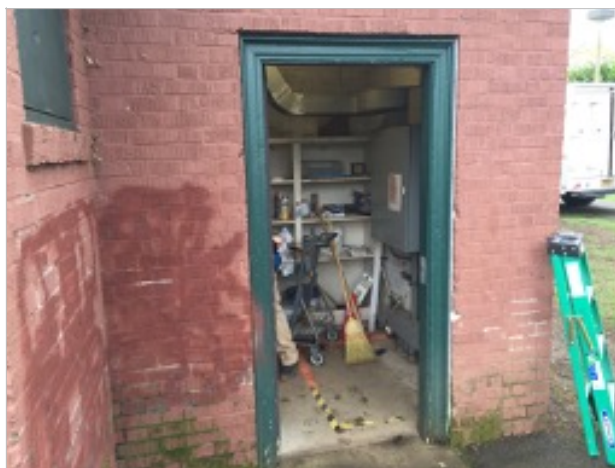
Woodstock Park South: Exterior, Fascia



Woodstock Park South: Restroom, Window Trim



Woodstock Park South: Restroom, Window Sill



Woodstock Park South: Storage Room, Door Jamb



Woodstock Park North: Exterior, Fascia



Woodstock Park North: Storage Room, Door Jamb



Woodstock Park North: Storage Room, Window



Essex Park: Exterior, Soffit



Essex Park: Exterior, Fascia



Essex Park: Exterior, Post



Berkeley Park: Exterior, Soffit



Berkeley Park: Exterior, Fascia

Appendix C:

Performance Characteristic Sheets (PCS)

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLp 300

Source: ^{109}Cd

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.

XLp 300A, XLp 301A, XLp 302A and XLp 303A.

XLi 700A, XLi 701A, XLi 702A and XLi 703A.

XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
Substrate	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

Appendix D:

Certifications & Accreditations

DKI CONSULTANTS LLC
16869 SW 65TH AVE # 15
LAKE OSWEGO OR 97035

CONSTRUCTION CONTRACTORS BOARD
LEAD INSPECTION CONTRACTORS LICENSE
LICENSE NO.: LBPI-223539
EXPIRATION DATE: 11/16/2019

This document certifies that

DKI CONSULTANTS LLC
16869 SW 65TH AVE # 15
LAKE OSWEGO OR 97035

is licensed in accordance with Oregon Law as a
Lead Inspection Contractor

STATE OF OREGON
CONSTRUCTION CONTRACTORS BOARD
LEAD INSPECTION CONTRACTORS LICENSE

LICENSE NUMBER: LBPI-223539

This document certifies that

DKI CONSULTANTS LLC
16869 SW 65TH AVE # 15
LAKE OSWEGO OR 97035

is licensed in accordance with Oregon Law as a Lead Inspection Contractor

License Details:

LICENSE NO.: LBPI-223539
EXPIRATION DATE: 11/16/2019

ANDREW PHILLIP LUTZ
16869 SW 65TH AVE #15
LAKE OSWEGO OR 97035

CONSTRUCTION CONTRACTORS BOARD
LEAD BASED PAINT RISK ASSESSOR LICENSE
LICENSE NO.: 9152526-RA

EXPIRATION DATE: 1/19/2020

This document certifies that

ANDREW PHILLIP LUTZ
16869 SW 65TH AVE #15
LAKE OSWEGO OR 97035

is licensed in accordance with Oregon Law as a
Lead Based Paint Risk Assessor

STATE OF OREGON
CONSTRUCTION CONTRACTORS BOARD
LEAD BASED PAINT RISK ASSESSOR LICENSE

LICENSE NUMBER: 9152526-RA

This document certifies that

ANDREW PHILLIP LUTZ
16869 SW 65TH AVE #15
LAKE OSWEGO OR 97035

is licensed in accordance with Oregon Law as a Lead Based Paint Risk Assessor

License Details:

LICENSE NO.: 9152526-RA
EXPIRATION DATE: 1/19/2020

State of Oregon
Oregon Health Authority

Andrew P. Lutz

is certified by the Oregon Health Authority to conduct Lead-Based Paint Activities

Risk Assessor

Certification Number:	2526--Indv--R
Issuance Date:	5/30/2017
Expiration Date:	6/30/2020



Oregon
Health
Authority