Shaping our community together

CITY OF LACEY

420 COLLEGE ST SE
LACEY, WASHINGTON 98503

LACEY MUSEUM & CULTURAL CENTER – BP1 DEMO

LACEY PROJECT NUMBER PW 2019-41

SPECIFICATIONS AND BID DOCUMENTS
DEPARTMENT OF PUBLIC WORKS

LACEY PROJECT NUMBER PW 2019-41

CITY OF LACEY
WASHINGTON

CITY OFFICIALS

MAYOR	**ANDY RYDER**
DEPUTY MAYOR	**CYNTHIA PRATT**
COUNCIL MEMBERS	**LENNY GREENSTEIN**
	MICHAEL STEADMAN
	CAROLYN COX
	ED KUNKEL
	MALCOLM MILLER
CITY MANAGER	**SCOTT H. SPENCE**
CITY ATTORNEY	**DAVID S. SCHNEIDER**
DIRECTOR OF PUBLIC WORKS	**SCOTT EGGER, P.E.**
CITY ENGINEER	**ROGER SCHOESSEL, P.E.**

Scott Egger, P.E.

LACEY PROJECT NUMBER PW 2019-41
CITY OF LACEY

I hereby certify that the Project Specifications were prepared by me or under my direct supervision and I am a duly registered Engineer under the laws of the State of Washington.

Ashley Smith
City of Lacey
Sections A, B, C, D, F and G

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PREVAILING MINIMUM HOURLY RATES

ADVERTISEMENT FOR BIDS

LACEY MUSEUM & CULTURAL CENTER – BP1 DEMO

NOTICE IS HEREBY GIVEN that sealed bids will be received by the City of Lacey at City Hall, Lacey, Washington until 2:30 p.m., January 6th, 2022, at which time bids will be publicly opened via a live video stream. Links to the YouTube live video stream can be found at http://www.ci.lacey.wa.us/city-government/city-departments/public-works/solicitations/public-works-advertisements under the specific project section and on the specific project page on the Builders Exchange website located at http://bxwa.com/bxwa_toc/pub/2080/toc.html for the following work:

This contract provides for demolition of an existing warehouse building and attached office space for the purpose of clearing the existing property for the construction of a new museum and event center with new parking lots under a separate bid package, to include site demolition, grading and other work.

Each bid must be accompanied by a certified check for five percent of the amount of the proposal made payable to the City Treasurer, or an approved bid bond for five percent of the amount of the proposal executed on the approved form attached to these specifications. If bid bond is used, the five percent may be shown in dollars and cents or the form may be filled in by inserting therein, in lieu thereof, "five percent of the amount of the accompanying proposal". Check of unsuccessful bidders will be returned immediately upon award of contract.

The City Council reserves the right to reject any and all bids and to waive all informalities.

Plans, Specifications, and Addenda for this project are available through the "City of Lacey" on-line plan room. Free of charge access is provided by going to http://bxwa.com and clicking on: "Posted Projects", "Public Works", "City of Lacey", and "Projects Bidding". Bidders are asked to "Register" in order to receive automatic email notification of future addenda and to be placed on the "Bidders List". Any questions regarding this contract can be directed to Ashley Smith, at (360) 413-4340.

The range for this project is $350,000 to $500,000.

A NON-MANDATORY PREBID CONFERENCE IS SCHEDULED FOR DECEMBER 20TH AT 10:00 AM. We will meet at 5700 LACEY BLVD SE, LACEY WA. From I-5: Take exit 109 toward Martin Way/College St, turn onto Martin Way E Westbound, turn left onto College St SE, turn left onto Lacey Blvd SE.

Peri Edmonds

Peri Edmonds, City Clerk
City of Lacey, Washington

Publish: **12/16/2021**
12/23/2021

A
INSTRUCTIONS

INSTRUCTIONS TO BIDDERS

Bidders shall examine contract and bid documents and the site and shall satisfy themselves as to conditions that exist.

Each Bidder shall submit to the City Clerk, Lacey, Washington a sealed bid endorsed upon the outside wrapper with **Lacey Museum & Cultural Center – BP1 Demo** at the time and place designated in the advertisement.

Bids may be delivered in person to Lacey City Hall, 420 College Street SE, or by mail to City of Lacey 420 College St SE Lacey, WA 98503.

Bids will be publicly opened via a live video stream. Links to the YouTube live video stream can be found at http://www.ci.lacey.wa.us/city-government/city-departments/public-works/solicitations/public-works-advertisements under the specific project section and on the specific project page on the Builders Exchange website.

The City of Lacey is committed to offering reasonable accommodations to persons with disabilities. We invite any person with special needs to contact the City Clerk at (360) 491-3212 at least seventy-two (72) hours before the meeting to discuss any special accommodations that may be necessary. Citizens with hearing impairment may call the TDD line at (800) 833-6388.

Each Bidder shall complete the proposal with prices in figures with the extension properly computed. The proposal must be properly signed by a duly authorized agent. Proposal must acknowledge addenda, if any, received.

If alternates are included in the proposal the Bidder shall complete the alternates. The City will award the contract to the lowest responsible Bidder as determined by the Special Provisions. The City reserves the right to delete alternates after award.

Each bid shall include properly executed bid surety as outlined in the Advertisement and the Proposal.

Each Proposal must be accompanied by a signed Affidavit of Non-Collusion.

The City does not pre-qualify Bidders. However, if the apparent low Bidder has not already been determined qualified, the City shall afford seven (7) days after notification for the low Bidder to provide evidence for evaluation, as to capability to perform the work. The evaluation will include consideration of experience, personnel, equipment, financial resources as well as performance record. The information must be sufficient to enable the Bidder to obtain the required qualification rating prior to the award of the contract.

No bidder may withdraw his bid after the hour set for the opening of bids or before award of the contract unless said award is delayed for a period of forty-five (45) days.

CONTRACT PARTS

The contract to be executed as a result of this bid consists of multiple parts, all of which pertain as if fully attached hereto and Bidder shall consider all parts as a complete document. In the event of discrepancies between the various parts, precedent shall be in the following order:

1. Contract Form,
2. Addenda (if any),
3. Proposal Form,
4. Special Provisions,
5. Technical Specifications, if included,
6. Contract Plans,
7. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction,
8. City of Lacey Development Guidelines and Public Works Standards

- The Bidder is directed to complete and return the forms in Section B as a bid proposal.

BIDDER'S CHECKLIST

The bidder's attention is especially called to the following forms which must be executed in full as required, and submitted with the bid proposal:

1. Proposal: The unit prices bid must be shown in the space provided.
2. Proposal Signature Sheet: To be filled in and signed by the bidder. All addenda must be acknowledged.
3. Bid Deposit: Any bid shall be accompanied by a deposit of cash, certified check, cashier's check, or surety bond, in an amount equal to at least five percent (5%) of the total amount bid. Checks shall be payable to the City Clerk, City of Lacey, Washington.

   If a surety bond is used, it shall be submitted on a form furnished by the Commission and signed by the bidder and his surety company. The sureties' "attorney-in-fact" must be registered with the Washington State Insurance Commissioner. The power of attorney must also be submitted with the bond. See Specification section 1-02.7 for more information.
4. Non-Collusion and Debarment Affidavit

The following form must be submitted within 24 hours following the bid submittal deadlines.

5. Certification of Compliance with Wage Payment Statutes

The following must be completed before the contract can be awarded:

6. L&I training on the requirements related to public works and prevailing wages per RCW 39.04.350
7. Declaration of Employment Security Department Good Standing

The following forms are to be executed after the contract is awarded:

8. Contract: This agreement to be executed by the successful bidder
9. Performance and Payment Bond
10. Insurance Certificate

Bidder's Checklist

1.	Proposal	
2.	Proposal Signature Sheet	
	Addenda Acknowledged	
3.	Bid Deposit	
	Power of Attorney included if applicable	
4.	Non-Collusion and Debarment Affidavit	
5.	Certification of Compliance with Wage Payment Statutes	
6.	L&I Public Works Prevailing Wage Training	
7.	Declaration of Employment Security Department Good Standing	

B
BID DOCUMENTS

CITY OF LACEY

Museum & Cultural Center - BP1 Demo

WSHS #23-21

Lacey Contract Number: PW 2019-41

Federal Aid Project Number:

WSDOT Contract Number:

TIB Contract Number:

Contract Proposal

DATE: _____

The undersigned, as bidder, has examined the bid documents as prepared by the Public Works Department, City of Lacey.

The undersigned, as bidder, proposes to furnish all material and perform all labor in accordance with the bid documents at the following prices.

Bidder must fill in unit prices in figures for each item and total.

Bidder shall sign this proposal form and submit all required paperwork with the bid.

A Base Bid - Bid Package #1

No.	Quantity	Unit	Item ID	Item Description	Unit Price	Extended Price
A1	25000	MC	104-010	Minor Change	$1.00	$25,000.00
A2	1	LS	109-010	Mobilization	LUMP SUM	
A3	1	LS	201-010	Clearing and Grubbing	LUMP SUM	
A4	1	LS	202-510	Removal of Structures and Obstructions	LUMP SUM	
A5	1	LS	202-520	Special Removal of Structures and Obstructions	LUMP SUM	
A6	200	CY	203-610	Excavation Incl. Haul		
A7	1	LS	205-510	Trench Safety System	LUMP SUM	
A8	1000	TN	404-010	Crushed Surfacing Base Course		
A9	1	LS	722-542	Electrical	LUMP SUM	
A10	1	LS	801-010	ESC Lead	LUMP SUM	
A11	1	AC	801-560	Seeding and Fertilizing		
A12	20000	FA	801-690	Erosion/Water Pollution Control	$1.00	$20,000.00
A13	1	LS	802-980	Landscaping	LUMP SUM	
A14	1	LS	850-605	Site Furnishings	LUMP SUM	
A15	1	LS	850-792	Project Closeout	$1,000.00	$1,000.00

Schedule A Subtotal: _____

Tax Rate (%) : 9.40 Tax: _____

Schedule A Total: _____

Contract Total: _____
(All Schedules)

The undersigned also agrees as follows:

- Within 10 calendar days after the contract is awarded to sign and return the contract and provide insurance documents.
- That this proposal cannot be withdrawn within 45 days after receipt of bids.
- That it is the understanding that the City of Lacey may accept or reject any or all bids.
- The undersigned hereby agrees to pay for labor not less than the prevailing rates of wages per the bid documents.
- Enclosed with this proposal is a bid deposit in the sum of 5% of the bid total amount which it is agreed shall be collected and retained by the City of Lacey as liquidated damages in the event this proposal is accepted by the City of Lacey with 45 calendar days after the receipt of bids and the undersigned fails to execute the contract and the required bond with the City of Lacey, under the conditions thereof, within 10 calendar days after the undersigned is notified that said proposal has been accepted, otherwise said bid deposit shall be returned to the undersigned upon demand.
- A Performance/Payment Bond will be furnished to the City with the contract.
- Retention will be held on this contract per RCW 60.28.011.

Addenda Receipt Acknowledged

_____,_____,_____

_____ _____

Signature of Bidder Date

(If an Individual, Partnership, or Non-Incorporated organization)

_____ _____

Firm Name Please Print Phone

Address of Bidder: _____

_____

Name and Address of Firm Members:

_____

_____

_____

_____

Signature of Bidder (if a Corporation)

Title: _____

Firm Name: _____ Phone: _____

Business Address: _____

Incorporated under the Laws of the State of _____

Officers Address

President: _____ _____

Secretary: _____ _____

Treasurer: _____ _____

BID DEPOSIT SELECTION

A bid deposit in an amount of five percent (5%) of the total bid amount is attached hereto:

CASH	☐	In the amount of _____
CASHIER'S CHECK	☐	In the amount of _____
CERTIFIED CHECK	☐	In the amount of _____
BID BOND	☐	In the amount of 5% of the total bid amount

CONTRACTOR'S BID DEPOSIT SURETY BOND
to City of Lacey, Washington

We,_____ , as Principal, existing under and by virtue of the laws of the State of Washington and authorized to do business in the State of Washington, and _____, as Surety, organized and existing under the laws of the State of _____ , are held and firmly bound unto the City of Lacey, a Washington municipality, as Obligee, in the penal sum of 5% of the total amount bid, not to exceed $_____ , for the payment of which we jointly and severally bind ourselves, and our legal representatives and successors.

WHEREAS, the Principal has submitted a bid for Museum & Cultural Center – BP1 Demo.

NOW THEREFORE, the condition of the obligation is such that if the Obligee shall accept the bid of Principal and make timely award to the Principal according to the terms of the bid documents; and the Principal shall, within ten days after notice of the award, exclusive of the day of notice, enter into the contract with the Obligee and furnish the contractor's bonds (performance and payment bonds) with Surety satisfactory to the Obligee in an amount equal to 100% of the amount of the bid proposed including additives, alternatives and Washington State sales tax, then this obligation shall be null and void; otherwise if the Principal fails to enter into the contract and fails to furnish the contractor's bonds within ten days of notice of award, exclusive of the day of notice, the amount of the bid deposit shall be forfeited to the Obligee, payable by the Surety; but in no event will the Surety's liability exceed the face amount of this bid bond.

This bond may be executed in two original counterparts, and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

PRINCIPAL (CONTRACTOR)	SURETY
_____	_____
Principal Signature Date	Surety Signature Date
_____	_____
Printed Name	Printed Name
_____	_____
Title	Title

Name, address, and telephone of local office/agent of Surety Company is:

_____

_____

NON-COLLUSION AND DEBARMENT AFFIDAVIT

State of)

)ss

County of)

I, the undersigned, being duly sworn, deposes and says that the person, firm, association, copartnership or corporation herein named, has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in the preparation and submission of a proposal of the City of Lacey for consideration in the award of a contract on the improvement described as follows.

I further certify that, except as noted below, the firm, association or corporation or any person in a controlling capacity associated therewith or any position involving the administration of State or federal funds; is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal or State agency; has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal or State agency within the past three years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgment rendered against said person, firm, association or corporation by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

I further acknowledge that by signing my signature, I am deemed to have signed and have agreed to the provisions of this affidavit.

_____

Name of Project

_____

Name of Firm

_____

Signature of Authorized Member

Sworn to before me this

_____ day of _____ ,20 _____

_____

Notary Public

(CORPORATE SEAL)

CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date, the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

_____
Bidder's Business Name

_____
Signature of Authorized Official*

_____
Printed Name

_____
Title

_____ _____ _____
Date City State

Check One:

Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

_____

If a co-partnership, give firm name under which business is transacted:

_____

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

This form must be submitted with the Bid Proposal or as a Supplement to the Bid no later than 24 hours after the time for delivery of the Bid Proposal, as provided for in Section 1-02.9 of the Contract Provisions.

CERTIFICATION OF EMPLOYMENT SECURITY DEPARTMENT (ESD)
GOOD STANDING AND NUMBER

The bidder hereby provides an ESD number and certifies that per RCW 39.04.350 and Title 50 RCW, in which the City will verify prior to entering into contract with the Contractor, that the Bidder has a valid ESD number and is deemed to be in good standing with Washington State's Employment Security Department.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

_____
Bidder's Business Name

_____
Employment Security Department (ESD) Number

_____
WA State Unified Business Identifier (UBI #)

_____
Signature of Authorized Official*

_____
Printed Name

_____
Title

Date	City	State

This form must be submitted with the Bid Proposal or as a Supplement to the Bid no later than 24 hours after the time for delivery of the Bid Proposal, as provided for in Section 1-02.9 of the Contract Provisions.

C

CONTRACT DOCUMENTS

Contract Number PW _____

CONSTRUCTION CONTRACT

THIS AGREEMENT, made and entered into this _____ day of _____, 20_____ , between the City of Lacey, hereinafter called Owner, under and by virtue of the charter, laws and ordinances of the said Owner and the laws of the State of Washington, and _____ hereinafter called Contractor,

WITNESSETH:

That in consideration of the payment, covenants and agreement hereinafter mentioned, attached and made a part of this Agreement, to be made and performed by the parties hereto, the parties covenant and agree as follows regarding:

1. The Contractor shall do all work and furnish all tools, materials and equipment in accordance with and as described in the attached Plans and Specifications, and in full compliance with the terms, conditions and stipulations herein set forth and attached, now referred to and by such reference incorporated herein and made a part hereof as fully for all purposes as if here set forth at length, and shall perform any alterations in or in addition to the work covered by this Contract and every part thereof and any force account work which may be ordered as provided in this Contract and every part thereof.

   The Contractor shall provide and bear the expense of all materials, labor, equipment, tools, implements and conveniences and things of every description that may be requisite for the transfer of materials and for constructing and completing the work provided for in this Contract and every part thereof, except such as are mentioned in the Specifications to be furnished by the Owner.

2. The Owner hereby promises and agrees with the Contractor to employ, and does employ the Contractor to provide the materials and to do and cause to be done the above described work and to complete and finish the same according to the attached Plans and Specifications and the schedule of unit or itemized prices hereto attached, at the time and in the manner and upon the conditions provided for in this Contract and every part thereof.

3. Contractor, for himself and for his heirs, executors, administrators, successors, assigns, does hereby agree to the full performance of all the covenants herein contained upon the part of Contractor.

4. It is further provided that no liability shall attach to Owner or Agent thereof by reason of entering into this Contract, except as expressly provided herein.

5. Payments will be made under the Contract according to the schedule of rates and prices and the specification attached and made a part thereof. Partial payments under the Contract will be made at the request of the Contractor not more than once each month upon approval of the Owner, as hereinafter specified, provided they are in accordance with the provisions of RCW 60.28.010. There will be reserved and retained from monies

earned by the Contractor, as determined by such monthly estimates, a sum equal to 5 percent of the Contract price.

Payment of the retained percentage shall be withheld for a period of forty-five (45) days following the final acceptance of the work and materials by the Owner, and shall be paid the Contractor at the expiration of said forty-five (45) days in event no claims, as provided by law, have been filed against such funds; and provided further, that releases have been obtained from all departments and agencies having jurisdiction over the activities of the Contractor. In the event such claims are filed, Contractor shall be paid such retained percentages less an amount sufficient to pay any such claims together with a sum sufficient to pay the cost of such action, and to cover attorney fees as determined by the Owner.

6. Requests for review of substitute items of material or equipment will not be accepted by the Owner or Agent from anyone other than the Contractor. If the Contractor wishes to furnish a substitute item, the Contractor shall make written application to the Owner's Agent for acceptance thereof, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, which shall be considered by the Owner in evaluating the proposed substitute. The Owner may require the Contractor to furnish at the Contractor's expense, additional data about the proposed substitute. The Owner will be the sole judge of acceptability, and no substitute will be ordered without the Owner's prior written acceptance. The Owner may require the Contractor to furnish at the Contractor's expense, a special performance guarantee or other surety with respect to any other substitute.

   The Owner or Agent will record the time and expenses in evaluating substitutions proposed by the Contractor. Whether or not the Owner accepts a proposed substitute, the Contractor shall reimburse the Owner for the costs of evaluating any proposed substitute.

7. The Owner reserves the right, after the final payment has been made, to claim and recover by process of law such sums as may be sufficient to make good any defects in the equipment or to recover any over-payment resulting from dishonest acts of the Contractor.

8. The contract time will commence to run, and the Contractor shall start to perform his obligation under the contract documents, on the day indicated in the Notice to Proceed given by Owner to Contractor; but in no event shall contract time commence to run later than the 30th calendar day after the date when both Owner and Contractor execute the Contract. A Notice to Proceed may be given at any time within thirty (30) calendar days after the date when both Owner and Contractor execute the Contract.

9. The Contractor shall guarantee the materials and workmanship for a period of one (1) year from and after the date of final acceptance by the Owner.

   If, within said guarantee period, repairs are required which, in the opinion of the Owner, are rendered necessary as a result of work or materials which are inferior, defective or not

in accordance with the terms of the Contract, the Contractor shall, promptly upon receipt of notice from the Owner, and without expense to the Owner, (a) correct all defects and place in satisfactory condition in every particular all of such guaranteed work and materials; (b) make good all damage which in the opinion of the Owner is caused by such defects; and (c) make good any other work or material or the equipment and contents of a building, structure or site disturbed in fulfilling any such guarantee.

If the Contractor, after notice, fails within ten (10) days to proceed to comply to the terms of this guarantee, the Owner may have the defects corrected, and the Contractor and his Surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the opinion of the Owner, delay would cause serious loss or damage, repairs may be made without notice being given to the Contractor and the Contractor shall pay the cost thereof.

IN WITNESS WHEREOF, the said Contractor has executed this instrument and the City Manager, pursuant to resolution duly adopted, has caused this instrument to be executed in the name of the City of Lacey the day and year first above-written.

_____

_____

_____
Contractor

_____
Contractor's Registration Number (UBI No.)

_____
City of Lacey Business License Number

_____
City Manager

ATTEST:
By:

_____
City Clerk

APPROVED AS TO FORM:
By :

_____
City Attorney

CONTRACTOR'S PERFORMANCE/PAYMENT BOND
to City of Lacey, Washington

The City of Lacey, Washington, in Thurston County, has awarded to _____ (Contractor), as Principal, a contract for the construction of the project designated as **LACEY MUSEUM & CULTURAL CENTER – BP1**, Project No. **PW 2019-41** in Lacey, Washington, and said Principal is required under the terms of the Contract to furnish a performance/payment bond in accordance with chapter 39.08 Revised Code of Washington (RCW).

The Principal, and _____(Surety), a corporation, organized under the laws of _____ and licensed to do business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Dept., are jointly and severally held and firmly bound to the City of Lacey, as Obligee, in the sum of $_____ total Contract amount (including Washington State sales tax), subject to the provisions herein.

The obligations of this bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all the terms and conditions of all duly authorized modifications, additions, and changes to said Contract that may hereafter be made, at the time and in the manner therein specified; shall pay all persons in accordance with chapters 39.08, 39.12, and 60.28 RCW, including all workers, laborers, mechanics, subcontractors, and material suppliers, and all persons who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work; shall warranty the work as provided in the Contract and shall indemnify and hold harmless the Obligee from any defects in the workmanship and materials incorporated into the work for the period identified in the Contract; and if such obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

This bond may be executed in two original counterparts and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

PRINCIPAL (CONTRACTOR)		SURETY	
_____		_____	
Principal Signature	Date	Surety Signature	Date
_____		_____	
Printed Name		Printed Name	
_____		_____	
Title		Title	

Name, address, and telephone of local office/agent of Surety Company is:

_____

_____

DECLARATION OF OPTION FOR MANAGEMENT OF STATUTORY RETAINED PERCENTAGE

A. I hereby elect to have the retained percentage of this contract held in a fund by the City of Lacey until forty-five (45) days following final acceptance of the work.

_____
Contractor (please print)

_____ _____
Date Signature

B. I hereby elect to have the City of Lacey invest the retained percentage of this contract from time to time as such retained percentage accrues and in accordance with RCW Ch. 60.28.

I hereby designate _____ as the repository for the escrow of said funds.

I hereby further agree to be fully responsible for payment of all costs or fees incurred as a result of placing said percentage in escrow and investing it as authorized by statue.

The City of Lacey shall not be liable in any way for any costs or fees in connection therewith.

_____
Contractor (please print)

_____ _____
Date Signature

C. I hereby elect to hold a retainage bond.

_____
Contractor (please print)

_____ _____
Date Signature

D

SPECIAL PROVISIONS

TABLE OF CONTENTS

SPECIAL PROVISIONS

INTRODUCTION TO THE SPECIAL PROVISIONS
(August 14, 2013 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2020 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such. The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)
(May 1, 2013 Lacey GSP)

Also incorporated into the Contract Documents by reference are:

Manual on Uniform Traffic Control Devices for Streets and Highways, currently adopted edition, with Washington State modifications, if any

Standard Plans for Road, Bridge and Municipal Construction, WSDOT/APWA, current edition

City of Lacey Development Guidelines and Public Works Standards, current edition

Contractor shall obtain copies of these publications, at Contractor's own expense.

DESCRIPTION OF WORK

This contract provides for demolition of an existing warehouse building and attached office space for the purpose of clearing the existing property for the construction of a new museum and event center with new parking lots under a separate bid package, to include site demolition and grading and other work.

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions
(January 4, 2016 APWA GSP)

Delete the heading Completion Dates and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date
The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date
The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date
The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date
The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date
The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date
The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date
The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications, or WSDOT General Special Provisions, to the terms "Department of Transportation", "Washington State Transportation Commission", "Commission", "Secretary of Transportation", "Secretary", "Headquarters", and "State Treasurer" shall be revised to read "Contracting Agency".

All references to the terms "State" or "state" shall be revised to read "Contracting Agency" unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.
All references to "State Materials Laboratory" shall be revised to read "Contracting Agency designated location".

All references to "final contract voucher certification" shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive

A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate
One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Business Day
A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond
The definition in the Standard Specifications for "Contract Bond" applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents
See definition for "Contract".

Contract Time
The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Notice of Award
The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency's acceptance of the Bid Proposal.

Notice to Proceed
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this Section and replace it with the following:

1-02.1 Qualifications of Bidder

(January 24, 2011 APWA GSP)

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.1(1) Supplemental Qualifications Criteria

(July 31, 2017 APWA GSP)

In addition, the Contracting Agency has established Contracting Agency-specific and/or project-specific supplemental criteria, in accordance with RCW 39.04.350(3), for determining Bidder responsibility,

including the basis for evaluation and the deadline for appealing a determination that a Bidder is not responsible. These criteria are contained in Section 1-02.14 Option C of these Special Provisions.

1-02.2 Plans and Specifications
(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	3	Furnished only upon request
Contract Provisions	3	Furnished only upon request
Large plans (22" x 34")	3	Furnished only upon request

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

1-02.4 Examination of Plans, Specifications and Site of Work

1-02.4(1) General
(August 15, 2016 APWA GSP Option B)

The first sentence of the last paragraph is revised to read:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business 3 business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.4(2) Subsurface Information
(March 8, 2013 APWA GSP)

The second sentence in the first paragraph is revised to read:

The Summary of Geotechnical Conditions and the boring logs, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract.

1-02.5 Proposal Forms
(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales

taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal

(November 20, 2020 Lacey GSP)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last paragraph, and replace it with the following:

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture.

1-02.6 Preparation of Proposal

(August 2, 2004 WSDOT 1-02.6OPT15.GR1)

The fifth and sixth paragraphs of Section 1-02.6 are deleted.

1-02.7 Bid Deposit

(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.9 Delivery of Proposal

(November 20, 2020 Lacey GSP)

Delete this section and replace it with the following:

Each Proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any "Supplemental Information" that is received after the time specified above, or received in a location other than that specified in the Call for Bids.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

(July 23, 2015 APWA GSP)

Delete this section in its entirety, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, Emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.12 Public Opening of Proposals

(November 20, 2020 Lacey GSP)

Delete and replace this section with the following:

Proposals will be opened and publicly read by live video stream per the "Instructions to Bidders" in Section A of these Specifications at the time as indicated in the call for Bids

1-02.13 Irregular Proposals
(October 1, 2020 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
a. The Bidder is not prequalified when so required;
b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
e. A price per unit cannot be determined from the Bid Proposal;
f. The Proposal form is not properly executed;
g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
i. The Bidder fails to submit written confirmation from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
j The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
k. The Bidder fails to submit a DBE Bid Item Breakdown form, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
l. The Bidder fails to submit DBE Trucking Credit Forms, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be rejected if:
a. The Proposal does not include a unit price for every Bid item;
b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
c. Receipt of Addenda is not acknowledged;
d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders
(May 17, 2018 APWA GSP Option A)

Delete this Section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Contracting Agency reserves the right to request

documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

If the Contracting Agency determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination..

1-02.15 Pre-Award Information
(August 14, 2013 APWA GSP)

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids
(January 23, 2006 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.3 Execution of Contract
(October 1, 2005 APWA GSP)

Revise this section to read:

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.3 Execution of Contract

(April 2, 2018 Lacey GSP)

Section 1-03.3 is supplemented with the following:

The Contract will not be executed until the Contractor completes sections I, III, and VIII of the Transfer of Coverage for the Construction Stormwater General Permit and returns the form to the Contracting Agency.

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
   a) Is registered with the Washington State Insurance Commissioner, and
   b) Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
   a) Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or

b) Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;

4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review

(November 30, 2018 APWA GSP)

Delete this section and replace it with the following:

Any decision made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 SCOPE OF THE WORK

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

(November 20, 2020 Lacey GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 presiding over 3, 3 over 4, and so forth):

1. Contract Form,
2. Addenda (if any),
3. Proposal Form,
4. Special Provisions,
5. Technical Specifications, if included,
6. Contract Plans,
7. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction,
8. City of Lacey Development Guidelines and Public Works Standards, and
9. WSDOT Standard Plans for Road, Bridge and Municipal Construction

1-04.4 Changes

(November 20, 2020 Lacey GSP)

Section 1-04.4 is supplemented with the following:

Change Orders will be transmitted electronically to the Contractor for signature. The Contractor shall apply all signatures electronically using the software provided by the Contracting Agency. Within 21 days

of execution of the Contract, the Contractor shall submit the names, email addresses, and text-message capable phone numbers for the authorized change order signers and shall bear the name, phone number and email of the officer providing this authorization. Delegation of authority to sign Change Orders shall be by the officer authorized to sign the Contract.

1-04.4(1) Minor Changes
(May 30, 2019 APWA GSP)

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to $15,000 or less may be made under the Bid item "Minor Change". At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All "Minor Change" work will be within the scope of the Contract Work and will not change Contract Time.

1-04.6 Variations in Estimated Quantities
(July 23, 2015 APWA GSP Option B)

Revise the first paragraph to read:

Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original Proposal quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of any Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original Proposal quantity, and if the total extended bid price for that item at time of award is equal to or greater than 10 percent of the total contract price at time of award. In that case, payment for contract work may be adjusted as described herein:

1-05 CONTROL OF WORK

1-05.4 Conformity With and Deviations from Plans and Stakes
Supplement this section with the following:

Roadway and Utility Surveys
(July 23, 2015 APWA GSP, Option 1)

The Engineer shall furnish to the Contractor one time only all principal lines, grades, and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Slope stakes for establishing grading;
2. Curb grade stakes;
3. Centerline finish grade stakes for pavement sections wider than 25 feet; and
4. Offset points to establish line and grade for underground utilities such as water, sewers, and storm drains.

On alley construction projects with minor grade changes, the Engineer shall provide only offset hubs on one side of the alley to establish the alignment and grade.

1-05.4(2) Survey Control and Electronic Files

(August 10, 2010 Lacey GSP)

Add the following new section:

The Contractor shall re-establish the survey control used in design by using existing survey monuments and other control points as provided by the City.

When requested by the Contractor, the City will provide an electronic version of the construction plans (drawings), for use by the Contractor at the Contractor's own risk. In all cases, the approved paper construction plans are the official contract documents. If the Contractor wishes to use the electronic version of the construction plans for the purposes of providing surveying of the proposed improvements, it shall be the Contractor's responsibility to verify that any coordinates used from the electronic file match the station and offset location given in the contract construction plans. Construction plans are diagrammatic in nature. The coordinate locations of the various graphic elements within the electronic files may not necessarily be precisely shown with respect to their coordinate position. In all cases, the location callouts in the contract construction plans shall govern.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.
Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

1-05.11 Final Inspections and Operational Testing

(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are

listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.12(1) One-Year Guarantee Period

(March 8, 2013 APWA GSP)

Add the following new section:

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Contracting Agency's written notice of a defect, and shall complete such work within the time stated in the Contracting Agency's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Contracting Agency's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Contracting Agency.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's work comply with the requirements of the Contract or any other legal rights or remedies of the Contracting Agency.

1-05.15 Method of Serving Notices

(March 25, 2009 APWA GSP)

Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Project Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer's office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

1-05.16 Water and Power

(October 1, 2005 APWA GSP)

Add the following new section:

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item.

1-06 CONTROL OF MATERIAL

1-06.1 Approval of Materials Prior to Use

(January 4, 2016 Lacey GSP)

The second sentence of first paragraph is revised to read:

The Contractor shall use the Qualified Product List (QPL), the Aggregate Source Approval (ASA) Database, or the City of Lacey Request for Approval of Material (COL RAM) form.

1-06.1(2) Request for Approval of Material (RAM)

The first paragraph is revised to read:

The COL RAM shall be used with all submittals. The COL RAM shall be prepared by the Contractor in accordance with the instructions and submitted to the engineer for approval before the material is incorporated into the Work..

Supplement this section with the following:

The Contractor shall submit sufficient information that describes the materials proposed as defined and described in these specifications and plans within 10 working days following the Notice to Proceed.

The Contractor shall submit one electronic of catalog cuts, shop drawings, and a material testing sample, as required for all items to be used in this contract for approval. The Contractor shall circle or highlight products and materials that are specific to this project, and cross out items that are not for this project.

All items not in exact compliance with the specifications must be noted as a change. The Contractor shall include an explanation, product specifications, sample articles, and any other items that will aid the Engineer in approving an item not in exact accordance with the specifications.

All submittals shall be submitted in Adobe Acrobat format and submittals that exceed 10 pages shall include a table of contents. Submittals that are not submitted in the format outlined may be rejected outright and the Contractor is required to resubmit in the correct format. The form and the submittal shall be sent in the same e-mail. Submittals that exceed 10 MB shall either be provided on a CD, a flash drive or via an internet link.

The Engineer will review submittals within 10 working days. The Contractor may request additional working days if approval or disapproval is not received in 10 working days. The Contractor may not request additional working days for failure to submit sufficient information to approve an item, or for rejection of an item not in accordance with the specifications.

Resubmittals shall be submitted within 5 working days from City's transmittal, to the contractor, of the Engineer reviewed submittal. If the submittal is "Rejected", the contractor shall resubmit the entire submittal. If the submittal is marked "Revise and Resubmit", the contractor shall submit items that are identified in the Engineer's comments.

Any material purchased or labor performed prior to such approval shall be at the Contractor's risk. The Contractor must receive all material approvals before the materials will be allowed on the project.

1-06.6 Recycled Materials
(January 4, 2016 APWA GSP)

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed
(October 1, 2005 APWA GSP)

Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

1-07.2 State Sales Tax
(June 27, 2011 APWA GSP)

Delete this section, including its sub-sections, in its entirety and replace it with the following:

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.6 Permits and Licenses

(January 2, 2018 WSDOT 1-07.6.OPT1.FR1)

INCLUDE A COPY OF THE CSWGP, INCLUDING THE PERMIT COVERAGE LETTER, IN AN APPENDIX TITLED
"NPDES CONSTRUCTION STORMWATER GENERAL PERMIT". DELETE PERMITS NOT USED BELOW.
Section 1-07.6 is supplemented with the following:

The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer with the exception of when the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved.

NAME OF DOCUMENT	PERMITTING AGENCY	REFERENCE NO.
Demolition Permit	City of Lacey	21-1005
Grading Permit	City of Lacey	21-1006
NPDES Construction Stormwater General Permit	Department of Ecology	WAR310714
Demolition Permit	Olympic Region Clean Air Agency	21DEM006280
Asbestos Permit	Olympic Region Clean Air Agency	TBD
Archaeology Permit	Department of Archaeology and Historic Preservation	TBD

1-07.9(5) Required Documents

(January 6, 2020 WSDOT 1-07.9(5).OPT1.GR1)

Section 1-07.9(5) is revised to read

General
All "Statements of Intent to Pay Prevailing Wages", "Affidavits of Wages Paid" and Certified Payrolls, including a signed Statement of Compliance for Federal-aid projects, shall be submitted to the Engineer using the State L&I online Prevailing Wage Intent & Affidavit (PWIA) system.

Intents and Affidavits
On forms provided by the Industrial Statistician of State L&I, the Contractor shall submit to the Engineer the following for themselves and for each firm covered under RCW 39.12 that will or has provided Work and materials for the Contract:

1. The approved "Statement of Intent to Pay Prevailing Wages" State L&I's form number F700-029-000. The Contracting Agency will make no payment under this Contract until this statement has been approved by State L&I and reviewed by the Engineer.

2. The approved "Affidavit of Prevailing Wages Paid", State L&I's form number F700-007-000. The Contracting Agency will not grant Completion until all approved Affidavit of Wages paid for the

Contractor and all Subcontractors have been received by the Engineer. The Contracting Agency will not release to the Contractor any funds retained under RCW 60.28.011 until "Affidavit of Prevailing Wages Paid" forms have been approved by State L&I and all of the approved forms have been submitted to the Engineer for every firm that worked on the Contract.

The Contractor is responsible for requesting these forms from State L&I and for paying any fees required by State L&I.

Certified Payrolls
Certified payrolls are required to be submitted by the Contractor for themselves, all Subcontractors and all lower tier subcontractors. The payrolls shall be submitted weekly on all Federal-aid projects and no less than monthly on State funded projects..

1-07.18 Public Liability and Property Damage Insurance

Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance

(January 4, 2016 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made, and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- The Contracting Agency and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors.

The Contractor shall ensure that all Subcontractors of every tier add all entities listed in 1 07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1 07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.

3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:
$1,000,000 Each Occurrence
$2,000,000 General Aggregate
$2,000,000 Products & Completed Operations Aggregate
$1,000,000 Personal & Advertising Injury each offence
$1,000,000 Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:
$1,000,000 Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.23 Public Convenience and Safety

1-07.23(1) Construction Under Traffic
(May 2, 2017 APWA GSP)

Revise the third sentence of the second paragraph to read:

Accessibility to existing or temporary pedestrian push buttons shall not be impaired; if approved by the Contracting Agency activating pedestrian recall timing or other accommodation may be allowed during construction.

1-07.23(1) Construction Under Traffic
(January 5, 2015 WSDOT 1-07.23(1).OPT5.FR1)

Section 1-07.23(1) is supplemented with the following

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any change in the closure hours.

Lane closures are not allowed on any of the following:

1. A holiday,

2. A holiday weekend; holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend. A holiday weekend includes Saturday, Sunday, and the holiday.

3. After 12:00 P.M. on the day prior to a holiday or holiday weekend, and

4. Before 12:00 P.M. on the day after the holiday or holiday weekend.

1-07.24 Rights of Way
(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that

the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters
(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference
(October 10, 2008 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer, and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

To review the initial progress schedule;
To establish a working understanding among the various parties associated or affected by the work;
To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
To establish normal working hours for the work;
To review safety standards and traffic control; and
To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

A breakdown of all lump sum items;
A preliminary schedule of working drawing submittals; and
A list of material sources for approval if applicable.

1-08.0(2) Hours of Work
(December 8, 2014 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 5 prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll

1-08.0(2)A Lacey Hours of Work

(October 16, 2014 Lacey GSP Option A)

Add the following new section:

Lacey Municipal Code (LMC) Chapter 14.38.010, prohibits outside construction activities between the hours of 9:00 p.m. and 7:00 a.m. in or adjacent to residential zones of the City. A waiver to this ordinance will not be allowed, except in case of emergency, or where operations are necessary during such hours in order to promote the safety of the traveling public as shown in theses specifications or as determined by the Engineer.

1-08.3(2)A Type A Progress Schedule

(March 13, 2012 APWA GSP)

Revise this section to read:

The Contractor shall submit five (5) copies of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which

format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

1-08.4 Prosecution of Work

(July 23, 2015 APWA GSP)

Delete this section in its entirety, and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

1-08.4(1) Order Of Work

(******)

Add the following new section:

Prior to starting construction and issuance of notice to proceed by the City, the Contractor shall furnish the Contracting Agency with a schedule, sequence, and method of proceeding with the work. This schedule shall address all items herein and must be approved by the Contracting Agency prior to commencing any construction operations. The following specific requirements shall be included into the project schedule:

- The Contractor shall prepare temporary power to the Depot structure prior to disconnecting power from the warehouse building.

1-08.5 Time for Completion

(******)

This project shall be completed in accordance with the provisions of Section 1-08 of the Standard Specifications within 80 working days. All design and submittal work for this project shall be completed within the first 14 calendar days of the contract.

1-08.5 Time for Completion

(November 30, 2018 APWA GSP Option A)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
    a. Certified Payrolls (per Section 1-07.9(5)).
    b. Material Acceptance Certification Documents
    c. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
    d. Final Contract Voucher Certification
    e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
    f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
    g. Property owner releases per Section 1-07.24

1-08.9 Liquidated Damages

(August 14, 2013 APWA GSP)

Revise the fourth paragraph to read:

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine that the work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of

all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.2(1) General Requirements for Weighing Equipment

(July 23, 2015 APWA GSP, Option 2)

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman's Daily Report, unless the printed ticket contains the same information that is on the Scaleman's Daily Report Form. The scale operator must provide an AM and PM tare weight for each truck on the printed ticket.

1-09.2(5) Measurement

(May 2, 2017 APWA GSP)

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

1-09.6 Force Account

(October 10, 2008 APWA GSP)

Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting Agency does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by Engineer.

1-09.9 Payments

(March 13, 2012 APWA GSP)

Supplement this section with the following:

Lump sum item breakdowns are not required when the bid price for the lump sum item is less than $20,000.

Delete the first four paragraphs and replace them with the following:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the

respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payment. The progress estimates are subject to change at any time prior to the calculation of the Final Payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of Progress Payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

1-09.9 Payments

(November 20, 2020 Lacey GSP)

Section 1-09.9 is supplemented with the following:

Progress payments and the Final Contract Voucher Certification (FCVC) will be transmitted electronically to the Contractor for signature. The Contractor shall apply all signatures electronically using the software provided by the Contracting Agency. Within 21 days of execution of the Contract, the Contractor shall submit the names, email addresses, and text-message capable phone numbers for the authorized signers and shall bear the name, phone number and email of the officer providing this authorization. Delegation of authority to sign progress payments and the FCVC shall be by the officer authorized to sign the Contract.

1-09.11(3) Time Limitation and Jurisdiction

(November 30, 2018 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13(3) Claims $250,000 or Less

(October 1, 2005 APWA GSP)

Delete this Section and replace it with the following:

The Contractor and the Contracting Agency mutually agree that those claims that total $250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13(3)A Administration of Arbitration

(November 30, 2018 APWA GSP)

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.1 General

(January 3, 2017 Lacey GSP)

Supplement this section with the following:

Delays to traffic shall be held to a minimum. There shall be no restrictions or interruptions to traffic on Saturdays, Sundays or Holidays. In addition, there shall be no restrictions or interruptions to traffic after 12:00 noon on the day prior to a holiday or holiday weekend.

There shall be no delay to medical, fire, police, or other emergency vehicles with flashing lights or sirens. The Contractor shall alert all flaggers and personnel of this requirement.

The Contractor shall be responsible for removing the permanent traffic signs, as deemed necessary by the Engineer, and shall install and maintain any temporary signs necessary for the safety of the public.

The Contractor shall maintain pedestrian access at all times, without having pedestrians enter the travel lane.

All lane restrictions shall be held to a minimum time and length. Lane closures shall comply with the traffic control plans and these specifications. If the Contractor wishes to deviate from the plans, the Contractor shall submit a traffic control plan to the Engineer, at no additional cost, that complies with the MUTCD, and the Traffic Control Plans, for approval by the Engineer within (5) five working days before the proposed lane closure. If the Engineer determines that lane restrictions are causing congestion, the Contractor will be required to open any lanes, as determined by the Engineer, until the congestion is eliminated.

During non-working hours, Saturdays, Sundays, and Holidays, the Contractor shall keep all lanes open to traffic throughout the limits of the project with the lane and sidewalk area completely clear of all material, tools, personnel, and equipment as directed by the Engineer.

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description

(October 16, 2009 Lacey GSP)

Supplement this section with the following:

The City of Lacey is a Tree City USA, and has deemed it necessary to protect all trees to the best of their ability. Only the trees that are evaluated by a certified Arborist as being diseased or detrimental to the project shall be removed as shown in the plans. The Contractor shall conduct a site review noting all trees within the construction zone prior to submitting a bid. Ease of construction, spoils, or stockpiling needs shall not justify tree removal.

A high visibility fence shall be installed around all trees and vegetation as required by the Engineer prior to beginning work. The Contractor shall be responsible for installing, maintaining and removing the high visibility fence as required.

Disposal of all organic waste shall be by Disposal Method No. 2. Disposal Method No. 1 and No. 3 will not be permitted in this contract. The City of Lacey encourages recycling of organic material at a certified organic recycling center.

The Contractor shall take all precautions necessary to protect the public, property, trees, and natural vegetation from harm. Any damage to utilities or other structures on public right-of-way or private property shall be restored by the Contractor or authorized agent at the Contractor's expense.

2-01.5 Payment

(October 16, 2009 Lacey GSP)

Modify this section with the following:

The unit contract price per acre or lump sum for “Clearing and Grubbing” shall be full pay for all work described in this section including “Roadside Cleanup”. If no bid item for “Clearing and Grubbing” or “High Visibility Fence” is included in the proposal, any work described in this section shall be incidental to the project.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description

(**** Lacey)**

Supplement this section with the following:

The following items plus all materials resulting from incidental work including clearing; grubbing and roadside cleanup shall be removed from the job site, disposed of in a waste site or when noted on the plans, delivered to the City.

This work consists of but shall not be limited to the following items:

Pavement	Building Materials
Sidewalk	Concrete
Foundations	Tanks
Curb and Gutter	Fencing
Catch Basins	Storm Sewer Pipe
Culverts	Refuse
Water Pipe	Fire Hydrants
Water Valves and Fittings	Valve Boxes
Meter Boxes	Silt Fence
Roadside Cleanup	Rocks and Stumps

2-02.2 Video

(July 17, 2012 Lacey GSP)

Add the following new section:

The Contractor shall provide pre-construction video of the existing conditions for the construction area including all easements, streets, alleys, and driveways within the project area. Further, video shall include existing drainage, driveways, sidewalks, and other frontage improvements. The Contractor shall also provide pre-construction video of the existing conditions of each face of an existing structure (houses, garages, sheds, fences, etc.), within 30 feet of the construction area.

The Contractor shall provide a copy of the video, in high definition DVD format, to the City prior to any construction.

All costs for providing and furnishing the pre-construction video shall be considered incidental to the Project and no other payment will be allowed.

2-02.3 Construction Requirements

(*** Lacey GSP)**

Supplement this section with the following:

Unless otherwise noted, catch basins and manholes shall be removed entirely.

The removal of an existing hydrant assembly shall consist of turning off the gate valve, removing the existing hydrant assembly, valve box and anything else that is within 2’ of the finished grade. Cap or plug the existing valve after the existing hydrant assembly has been removed. The Contractor shall return

the existing fire hydrant assembly to the City. If the existing hydrant is damaged due to the Contractor's negligence, the Contractor shall replace the hydrant with a new hydrant.

The Contractor shall use due care and caution during removal and transportation of the salvaged material so that no damage occurs to the salvaged material. Any damage caused by the Contractor shall be deducted from the amount due.

2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters

(October 16, 2016 Lacey GSP)

Supplement this section with the following:

In removing pavement, sidewalks, and curbs, the Contractor shall:

1. Mark all cut lines in the field and have the Engineer approve them prior to commencing cutting operations. The Engineer reserves the right to adjust removal to the nearest construction joint.

2. Make a vertical saw cut between any existing pavement, sidewalk, or curb that is to remain and the portion to be removed.

3. All sawcuts shall be continuous and made with saws designed specifically for this purpose; no skip cutting, wheel cutting, or jack hammering will be allowed unless given prior approval by the Engineer.

4. Replace at no expense to the Contracting Agency any pavement designated to remain that is damaged during the removal of other pavement. All damaged sidewalks and curbs shall be replaced to the nearest existing joint.

5. Haul all broken–up pieces of pavement, sidewalks, and curbs to an off-project disposal site.

All transitions to existing asphalt or cement concrete driveways, parking lots, curb and gutter and walkways shall be vertically sawcut full-depth with straight, uniform edges. Existing asphalt pavement roadway edge may be cut with a wheel, provided the wheel cut is full depth and no damage occurs to the pavement which is to remain. Neither impact tools nor pavement breakers may be used for trench crossing of existing pavement. Trench crossing of existing pavement shall be vertically sawcut.

When sawcutting the existing roadway is needed to widen the road to perform excavation, the Contractor shall take extra precaution to make a neat, uniform cut, and shall sawcut pavement to full depth, regardless of number of passes necessary. Compaction of asphalt near the sawcut is critical and a vertical, neat line sawcut is required. If in the opinion of the Engineer, the cut is not satisfactory due to Contractor's workmanship or equipment, or if the sawcut becomes damaged and irregular, the Contractor shall fix the problem to the satisfaction of the Engineer, at Contractor's own expense.

The Contractor may grind the existing pavement in lieu of excavation and haul. Spoils from grinding can be stockpiled and used and paid for per sections 4-04.3(12), 4-04.4 and 4-04.5. If the Contractor elects to grind and stockpile the existing pavement, all costs and expenses necessary to furnish all labor, equipment, tools and materials shall be incidental to other bid items and no additional compensation will be allowed.

2-02.3(4) Special Removal of Structures and Obstructions

(January 3, 2011 Lacey GSP)

This work shall include demolition and razing of the property at 5700 Lacey Blvd SE to include but not limited to; the metal and wood structures, footings, foundations, fencing, bollards, landscaping, utilities and all other items and refuse on the site and within the structures. All material shall be hauled to an approved recycling center or disposal site.

This work will require a Olympic Region Clean Air Agency and City of Lacey Demolition Permit. The Contractor will be required to obtain permit approval and meet all required conditions.

2-02.5 Payment

(March 18, 2015 Lacey GSP)

Delete this section and replace with the following:

"Removal of Structures and Obstructions", lump sum.
"Special Removal of Structures and Obstructions", lump sum.
The lump sum contract price for these bid items shall be full compensation for all labor, equipment and materials necessary to complete the requirements of this section.

2-03 EXCAVATION

2-03.1 Description

(May 31, 2014 Lacey GSP)

The following is added at the beginning of this section:

The Work described in this Section includes foundation and site excavation, debris pile removal, and hauling and disposing of all excavated material. Work includes but is not limited to all operations and material handling necessary to prepare, stockpile, and otherwise process the excavated material for hauling and disposal offsite.

All Work described here shall be in accordance with the lines, grades, cross-sections and elevations shown on the Plans or established by the Engineer, and shall include any additional excavation necessary to accommodate placement of soil amendment to the elevations described in 4-04 Ballast and Crushed Surfacing and 8-01 Seeding and Fertilizing.

2-03.3(7)A General

(October 29, 2010 Lacey GSP)

Supplement this section with the following:

"Excavation Incl. Haul" material shall be excavated as shown on the Plans, and disposed of according to Section 2-03.3(7) C.

2-03.3(7)C Contractor-Provided Disposal Site

(October 16, 2009 Lacey GSP)

Supplement this section with the following:

The Contracting Agency has not provided a waste site for disposal of excess materials and debris.

2-03.3(14)C Compacting Earth Embankments
(October 29, 2010 Lacey GSP)

Supplement this section with the following:

The Contractor shall be required to compact all embankments in accordance with Method C as described in Section 2-03.3(14) C of the Standard Specifications.

2-03.3(14)D Compaction and Moisture Control Tests
(October 16, 2016 Lacey GSP Option A)

Supplement this section with the following:

The Contractor shall be responsible for scheduling and coordinating with the City's testing laboratory. No adjustment to the contract price or time for delays will be made if the contractor fails to schedule the needed testing.

2-03.3(14)E Unsuitable Foundation Excavation
(October 29, 2010 Lacey GSP)

Supplement this section with the following:

The Contractor shall excavate to stable material and backfill in lifts with Crushed Surfacing Base Course or Gravel Borrow as identified by the Engineer.

If the Contractor excavates to a depth beyond that shown in the Plans without the Engineer's approval, all costs shall be at the Contractor's expense.

2-03.4 Measurement
(October 29, 2010 Lacey GSP)

Supplement this section with the following:

The quantity of the following items to be paid for on this project shall be quantities shown on the bid proposal:

"Excavation Incl. Haul", per cubic yard.

The quantities in the bid proposal are based on a computer generated earthwork calculated on the existing ground survey. The quantities do not incorporate expansion, clearing and grubbing, or construction methodology. These values are listed for the convenience of the Contractor in determining the volume of work involved as calculated by the Engineer and are not guaranteed to be accurate. The prospective bidders shall verify these quantities prior to submitting the bid. A digital copy of the survey is available to prospective bidders from the Contracting Agency at the Contractor's request. No adjustments will be made in these quantities although the actual quantities may deviate from those listed.

2-03.5 Payment
(October 29, 2010 Lacey GSP)

Supplement this section with the following:

"Excavation Incl. Haul", per cubic yard.

The unit contract price per cubic yard for "Excavation Incl. Haul" shall be full compensation for all costs incurred for excavating, loading, placing, hauling, shaping, and disposing of the material.

2-05 TRENCH SAFETY SYSTEM

(October 16, 2009 Lacey GSP)

Add the following new section:

2-05.1 Description

This work consists of furnishing, utilizing, moving, and maintaining a trench safety system.

2-05.3 Construction Requirements

The Contractor shall comply with all applicable state laws, OSHA, WISHA requirements, and Department of Labor and Industries regulations governing trench excavation and pipe laying.

If extra excavation is used in lieu of, or in addition to shoring, cribbing, trench shields, or trench boxes, and select backfill material is required in the trench zone, then select backfill shall be used in the extra excavation zone.

2-05.4 Measurement

Trench safety system shall be paid for per lump sum regardless of the type, size and quantity used.

2-05.5 Payment

The lump sum contract price for "Trench Safety System" shall be full compensation for all labor, tools, equipment, and materials necessary to comply with the requirements stated above.

2-07 WATERING

2-07.3 Construction Requirements

(October 16, 2009 Lacey GSP)

Supplement this section with the following:

If the Contractor anticipates the use of City water, the Contractor shall apply for a water meter through the City of Lacey. Any damage rendered to the meter shall be repaired or replaced by the Contracting Agency and those costs deducted from monies due to the Contractor. All water used shall be metered and used sparingly for the entire length of the project. The Contractor will not be charged for water used on the project.

The Contractor shall use the water to keep the project site clean and to control dust during and after construction hours as determined by the Engineer.

2-07.4 Measurement

(October 16, 2009 Lacey GSP)

Delete and replace this section with the following:

The Contractor shall apply for a construction meter through the Contracting Agency. All water used shall be measured with the Contracting Agency supplied meter.

2-07.5 Payment

(October 16, 2014 Lacey GSP)

Delete and replace this section with the following:

The Contractor will not be charged for water used on this project. A construction meter will also be provided free of charge. Any costs to repair meters damaged by the Contractor shall be recovered from monies due the Contractor.

All costs to supply tank trucks, and apply water as directed by the Engineer shall be considered incidental to the project and no other payment will be allowed.

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3 Construction Requirements

8-01.3(1) General

(May 28, 2020 WSDOT GSP)

Section 8-01.3(1) is supplemented with the following:

The Contractor shall identify the ESC Lead at the preconstruction discussions and in the TESC Plan. The ESC Lead shall have, for the life of the Contract, a current Certificate of Training in Construction Site Erosion and Sediment Control from a course approved by the Washington State Department of Ecology. The ESC Lead must be onsite or on call at all times throughout construction. The ESC Lead shall be listed on the Emergency Contact List required under Section 1-05.13(1).

The ESC Lead shall implement the TESC Plan. Implementation shall include, but is not limited to:

1. Installing, adaptively managing, and maintaining temporary erosion and sediment control BMPs to assure continued performance of their intended function. Damaged or inadequate BMPs shall be corrected immediately.

2. Updating the TESC Plan to reflect current field conditions.

3. Inspecting and reporting on all areas disturbed by construction activities, all on-site erosion and sediment control BMPs, and all storm water discharge points every calendar week and within 24 hours of runoff events in which storm water discharges from the site or as directed by the Engineer.

4. Submit to the Engineer no later than the end of the next working day following the inspection a TESC Inspection Report that includes:

a. When, where, and how BMPs were installed, maintained, modified, and removed.

b. Observations of BMP effectiveness and proper placement.

c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal TESC BMP deficiencies.

d. Identify for each discharge point location whether there is compliance with state water quality standards in WAC 173-201A for turbidity and pH.

Inspection of temporarily stabilized, or inactive sites may be reduced to once every calendar month if allowed by the Engineer.

8-01.3(9)A2 Silt Fence
(October 16, 2014 Lacey GSP)

Supplement this section with the following:

If the Engineer determines that site conditions dictate additional silt fence throughout the duration of the project, the Contractor shall immediately install additional silt fence as directed by the Engineer.

8-01.3(9)D Inlet Protection
(November 20, 2020 Lacey GSP)

Delete the first paragraph and replace with the following:

All catch basins and inlets within 500 ft of the project limits, downstream or affected by construction activities shall have inlet protection and as required by the Engineer. Inlet protection devices shall be installed prior to beginning clearing, grubbing, or earthwork activities.

8-01.4 Measurement
(April 30, 2015 Lacey GSP)

Modify this section with the following:

No specific unit of measure shall apply to the lump sum item "ESC Lead"

8-01.5 Payment
(November 20, 2020 Lacey GSP)

Modify this section with the following:

"Silt Fence", per linear foot.
"High Visibility Silt Fence", per linear foot
The unit contract price per linear foot shall be full pay for all equipment, labor and materials to install, maintain, remove and dispose of the silt fence as shown in the Plans and as directed by the Engineer.

The lump sum contract price for "ESC Lead" shall be full compensation for all labor, material, tools, and equipment necessary to meet the requirements of Section 8-01.3(1)B to include conduct site inspections, stormwater sampling, report preparation, report submittal, lab work, and personnel certification.

The force account contract price for "Erosion/Water Pollution Control" shall be full compensation for all labor, material, and equipment necessary to implement, install, maintain and remove all erosion and water pollution control items including removal and disposal of sediment, stabilization and rehabilitation of soil disturbed by these activities, and any additional Work deemed necessary by the Engineer to control erosion and water pollution and all Work required for compliance with the Construction Stormwater General Permit (CSWGP) including annual permit fees. The Contractor shall bear full responsibility for erosion/water pollution control in all sources of material, disposal sites, and haul roads.

8-05 LAWN AND LANDSCAPE RESTORATION
(October 16, 2014 Lacey GSP)

Add the following new section:

8-05.1 Description
The Contractor shall take every precaution to preserve and protect existing lawn and landscape areas. Only those landscaped areas necessary for construction shall be disturbed. All lawn areas and landscaping damaged or removed shall be repaired as directed by the Engineer. Lawn areas damaged or removed shall be restored with sod as directed by the Engineer.

8-05.3 Construction Requirements
The Contractor shall repair any vegetation, fencing, culverts, ditch sections, or any other objects or structures that are not covered by a specific bid item. Restoration shall return anything damaged by construction to their original condition or to a condition superior to the original condition. The Contractor shall be responsible to evaluate the site prior to bidding this project to determine the areas to be affected by the particular construction method or machinery proposed to be used.

8-05.4 Measurement
No unit of measure shall apply to the lump sum price for Lawn and Landscape Restoration.

8-05.5 Payment
"Landscaping lump sum.
The lump sum contract price for "Landscaping" shall be full pay for all labor, materials, and equipment to construct landscaped areas in accordance with the Plans and Specifications.

If no bid item for "Lawn and Landscape Restoration" is included, any work described in this section shall be incidental to the project.

8-20 ELECTRICAL

8-20.1 Description
(******)

This Work consists of furnishing, installing and field testing all materials and equipment necessary to complete in place, fully functional system(s) by connecting to an existing system all in accordance with approved methods, industry codes and standards, the Plans, and Specifications.

8-20.1(3) Permitting and Inspection
(November 20, 2020 Lacey GSP)

The Contractor shall obtain an Electrical Permit prior to performing any work on this project. Regular electrical inspections shall be scheduled by the Contractor.

All costs to obtain the Electrical Permit and comply with the requirements, shall be incidental to the project and no other compensation will be allowed.

8-20.5(5)A Payment
(******)

The lump sum unit price shall be full pay for furnishing all labor, materials, tools, and equipment necessary for the construction of the complete electrical system, modifying existing systems, or both, as shown in the plans and herein specified including wire, pipe, pipe connections, elbows, bends, caps, reducers, conduits, unions, breakers, junction boxes, and fittings; for placing the pipe in accordance with the above provisions, including all excavation, jacking, or drilling required, backfilling of any voids around casing, conduits, pits, or trenches, bedding of the pipe; restoring facilities destroyed or damaged during construction, salvaging existing materials, and for making all required tests; and all other Work necessary for the construction. All additional materials and labor, not shown in the plans or called for herein and which are required to complete the fully operational electrical system, shall be included in the lump sum contract price.

8-50 MISCELLANEOUS

Add the following new sections:

8-50.1 SITE FURNISHINGS

******

Description

This work shall consist of furnishing and installing entry gates and ecology blocks in accordance with Plans and Specifications.

Measurement

No unit of measurement shall apply to the lump sum price for “Site Furnishings”.

Payment

The lump sum unit price shall be full pay for furnishing all labor, materials, tools, and equipment necessary for the construction of entry gates as shown in the plans including all excavation, jacking, or drilling required, backfilling of any voids around foundations,; restoring facilities destroyed or damaged during construction, salvaging existing materials, and for making all required tests; and all other Work necessary for the construction. All additional materials and labor, not shown in the plans or called for herein and which are required to complete the fully operational system, shall be included in the lump sum contract price.

8-50.2 PROJECT CLOSEOUT

(April 2, 2018 Lacey GSP)

Description

This work shall consist of completing all miscellaneous items of work in accordance with the Plans and these Specifications that are required to achieve Completion and Final Acceptance, as identified by the Engineer and the Contracting Agency. This work may include but is not limited to punch list items, record drawings, O&M Manuals, training, material acceptance documents, copies of the approved “Affidavit of Prevailing Wages Paid” for the Contractor and all Subcontractors, and any other work required in these Plans and Specifications that has not been completed.

Measurement

No unit of measurement shall apply to the lump sum price for "Project Closeout".

Payment

"Project Closeout", lump sum.
The unit contract price per lump sum for "Project Closeout" includes all compensation for all costs of completing the miscellaneous items of work identified by the Contracting Agency prior to final acceptance of the Project. A fixed lump sum price has been included in the Proposal for this work. Any additional costs anticipated or incurred by the Contractor for the work shall be included in the various lump sum and unit price bid items as found in the Proposal. Neither partial payment, nor additional compensation shall be allowed.

9-14 EROSION CONTROL AND ROADSIDE PLANTING

9-14.1(1) Topsoil Type A

(October 16, 2009 Lacey)

Supplement this section with the following:

Topsoil Type A shall be composed of a three way winter mix consisting of 2 parts soil, 2 parts compost, 3 parts sand.

Soil shall be classified as gravelly sand, well-graded sand, poorly graded sand, or silty sand.

Compost shall be a weed free well decomposed, humus-like material derived from the decomposition of grass clippings, leaves, branches, wood, and other organic materials. Compost shall be produced at a permitted solid waste composting facility. Composts containing shavings, cedar sawdust, or straw will not be permitted.

Sand shall consist of 100 percent passing the 3/8 inch sieve, minimum 95 percent passing the #4 sieve, and maximum of 5 percent passing the #100 sieve.

Topsoil shall meet the following requirements:

Screen Size (approximate particle size)	5/8" maximum
Maturity measure (C:N ratio)	30:1
Total Nitrogen	0.5% minimum
PH range	5.5-8.0
Foreign matter by dry weight	1% maximum

The Contractor shall provide a sample of the topsoil and a laboratory analysis with recommendations from the laboratory for desired additives for the Engineers approval. The Contractor shall incorporate any additives recommended by the laboratory.

9-14.2 Seed

(November 20, 2020 Lacey)

Supplement this section with the following:

There shall be several types of mixes used on this project. The list of approved seed varieties are specifically identified list below. They shall be applied at the given rates. Source identified seed shall be fourth generation or earlier. Non-Source Identified seed shall meet or exceed Washington State Department of Agriculture Certified Seed Standards. Seeds shall be certified "Weed Free", indicating there are no noxious or nuisance weeds in the seed.

Lawn Mix - shall be applied at 200 pounds per acre and the maximum weed seed shall be no more than 0.5%. Grass seed of the following composition, proportion, and quality shall be applied as follows:

Kind and Variety of Seed	Percent By Weight	Minimum Pure Seed	Minimum Germination
Equal Mix 3-Perennial Ryegrasses	60%	98%	90%
One Chewing Fine Fescue	20%	98%	90%
One Creeping Red Fescue	20%	98%	90%

Approved Seed Type:

Perennial Ryegrasses

Fiesta 4	Manhattan 5	Grand Slam GLD	Karma
SR 4650	Karma	Banfield	Sideways
Thrive	Wicked	Pavilion	Dasher 3
Tetradark			

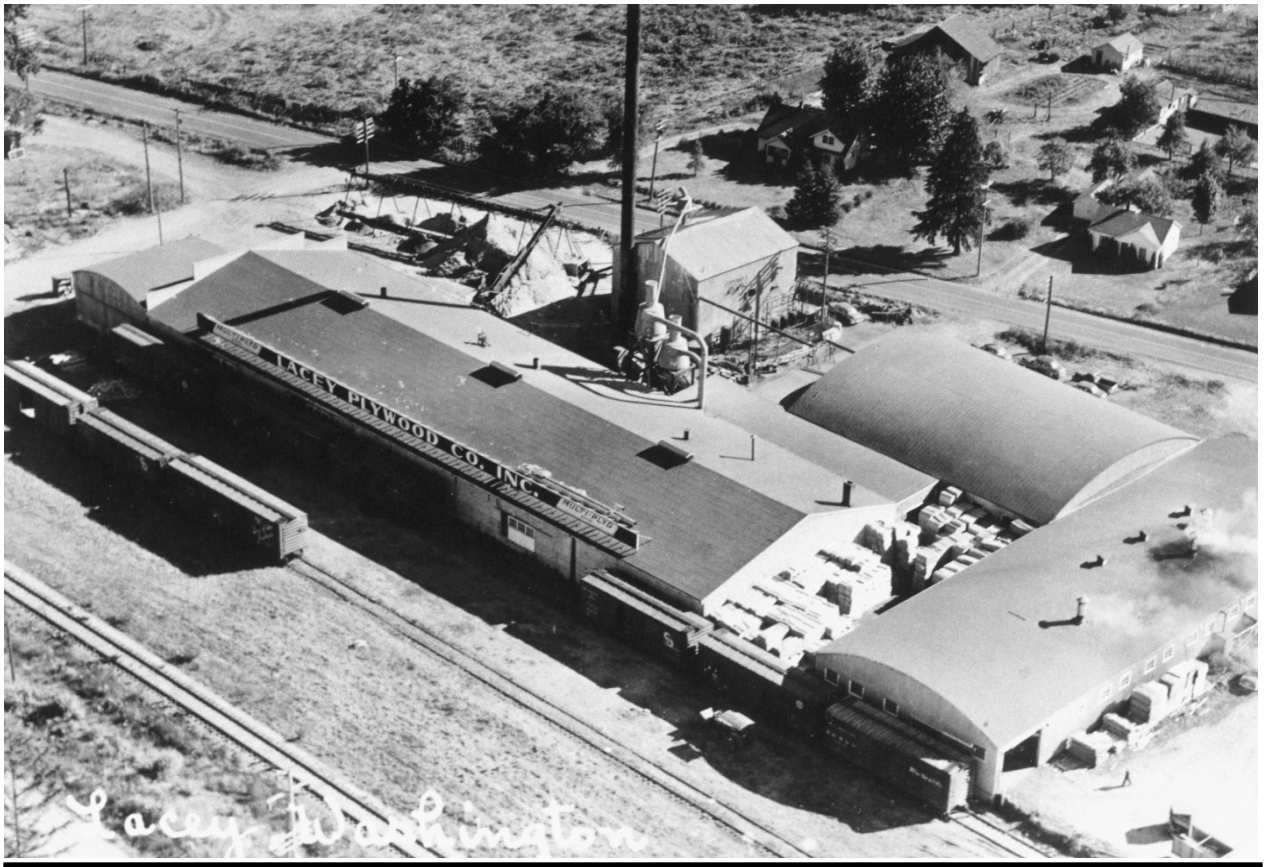
Creeping Red Fescue

Salsa	Cindy	Jasper	Salem

Chewing Fescue

Tiffany	Shadow II	Treazure E	Longfellow
Weekend	Tamara	Enjoy	Victory

E
TECHNICAL SPECIFICATIONS



LACEY MUSEUM AND CULTURAL CENTER

Project Manual – Bid Package No. 1 – Bid Set

Divisions 01 - 33

December 16, 2021

10347
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END OF TABLE OF CONTENTS

SECTION 00 31 00
AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 EXISTING REPORTS AND SURVEYS

A. The following report is hereby disclosed and included in this specification for reference by the Contractor:

1. Hazardous Building Materials Survey, Future City of Lacey Museum, Lacey, Washington, dated April 2, 2021, as prepared by Med-Tox Northwest; 54 pages.

B. Neither the Owner or Architect guarantees the accuracy of this information, the accuracy of the indicated testing locations, nor the continuity or quantity of the conditions identified at those locations. The report author is responsible for the accuracy of the laboratory analysis and any recommendations made.

C. Bidders are solely responsible for any interpretations or conclusions they may draw from their review of this report and utilize in assessing the scope, procedures, and/or difficulty of completing their work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

HAZARDOUS BUILDING MATERIALS SURVEY

Demolition

Future City of Lacey Museum
5700 Lacey Boulevard Southeast
Lacey, Washington 98503

Submitted To:

City of Lacey
420 College Street Southeast
Lacey, Washington 98503

Prepared By:

Med-Tox Northwest
Post Office Box 1446
Auburn, Washington 98071-1446
Telephone: 253-351-0677

Project No. 8998.1

April 2, 2021

Jon A. Havelock, CSP, CHMM
AHERA BI Exp. 9/2021

Table of Contents

Tables

Acronyms

AAS	atomic absorption spectroscopy
ACM	asbestos-containing materials
AHERA	Asbestos Hazard Emergency Response Act
ASHARA	Asbestos Schools Hazard Abatement Reauthorization Act
ASTM	American Society of Testing and Materials
CHMM	Certified Hazardous Materials Manager
CHR	Chrysotile
CSP	Certified Safety Professional
CFC	chlorofluorocarbons
CFR	Code of Federal Regulation
DEHP	Di (2-ethylhexyl) phthalate
DOSH	Department of Occupational Safety and Health
ECD	electron capture detectors
EMSL	EMSL Analytical, Inc.
EPA	U.S. Environmental Protection Agency
GC	gas chromatography
GWB	gypsum wallboard
HBM	hazardous building materials
HID	high intensity discharge
HM	homogeneous material
LBP	lead-based paint
mg/cm^2	milligrams per square centimeter
mg/kg	milligrams per kilogram
MTNW	Med-Tox Northwest
NVLAP	National Voluntary Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
% wt.	percent by weight
ORCAA	Olympic Region Clean Air Agency
PCB	polychlorinated biphenyl
PLM	polarized light microscopy
ppm	parts per million
SAT	Seattle Asbestos Test
SF	square feet

TSI	thermal system insulation
WAC	Washington Administration Code
WDOC	Washington State Department of Commerce
XRF	X-Ray fluorescence

Survey Summary

On March 17, 2021 Jon A. Havelock, CSP, CHMM of Med-Tox Northwest (MTNW) conducted a pre-demolition hazardous building materials (HBM) survey of the future City of Lacey Museum site which has a warehouse that will be demolished located at 5700 Lacey Boulevard Southeast in Lacey, Washington. This work was conducted on behalf of the City of Lacey in accordance with our proposal 8998.1.

No other Hazardous Materials Surveys were available for review at the time of the survey. The building was occupied at the time of the survey and MTNW was unable to perform selective building demolition to access potentially hidden HBM. Selective demolition is defined as demolishing sections of building components to identify concealed or multiple layers of materials that may be suspect for asbestos content that requires significant repair once completed.

This report identifies building materials that contain asbestos, estimates the quantity of asbestos-containing material (ACM) present and documents building materials that potentially contain lead-based paint (LBP), polychlorinated biphenyls (PCBs), and other hazardous materials that require removal or management as part of demolition activities. Washington Administrative Code (WAC) 296-155-775 requires identification of asbestos and hazardous materials and their hazards eliminated before demolition is started.

As required by WAC 296-62-077 and Olympic Region Clean Air Agency (ORCAA), building inspectors certified under the Asbestos Hazard Emergency Response Act (AHERA) and employed by MTNW conducted the asbestos portion of the survey. Copies of the inspectors' AHERA building inspector and Washington Department of Commerce (WDOC) LBP Risk Assessor certificates are included in **Appendix A**.

Building Information

Photographic documentation of the structure and the major systems described herein are provided in **Appendix B**.

General and Structural:

Constructed in 1995 (according to Thurston County Records), this warehouse building is approximately 16,000 square feet (SF) and has two distinct building sections. The warehouse has metal framing with fiberglass batt insulation and sheet metal roofing and siding. It has limited gypsum wall board (GWB) finishes (west end) but otherwise is un-finished.

The office section does not have a construction date and is wood framed with a flat roof and built-up roof system. It does have the appearance of 1995 construction.

Heating and Mechanical Systems:

Heating systems for the warehouse space consist of gas fired ceiling mounted forced air furnaces located along the perimeter walls of the building. The office portion has a forced air furnace, the duct systems are located on the roof and are not insulated.

Domestic water pipes run in the walls after coming up through the concrete slab and did not have visible insulation.

Walls/Ceiling:

Walls throughout the office space are mostly finished with wall paneling that is clearly nailed in place, three locations were checked for adhesives and none were found. The ceilings throughout are painted GWB.

Floor Systems:

The warehouse is unfinished but does have some newer gray epoxy type floor leveling compound. The office area has carpet throughout most of the space and sheet vinyl flooring in the hall to the kitchen and restroom. One restroom has newer ceramic floor and wall tile.

Asbestos Survey

The AHERA regulation, 40 Code of Federal Regulation (CFR) 763, is the primary governing regulation when performing asbestos surveys. This regulation was originally enacted for school buildings but has since been applied to public and commercial buildings by the Asbestos School Hazard Abatement Reauthorization Act (ASHARA) in 1994 and by the Occupational Safety and Health Administration's (OSHA) worker protection regulations in 1995, specifically 29 CFR 1926.1101(k).

ORCAA also requires compliance with AHERA's survey and sampling requirements. This applies to any renovation or demolition activities where suspect ACM may be disturbed. ORCAA is a local agency that receives statutory authority from the United States Environmental Protection Agency (EPA) to enforce environmental regulations.

AHERA divides suspect ACM into three categories; "surfacing materials" (i.e., sprayed fireproofing, popcorn ceiling texture, etc.), "thermal system insulation" (TSI) (i.e., pipe or building insulation, etc.), and "miscellaneous materials" (i.e., flooring material, roofing, construction mastics, etc.). For a complete listing of suspect materials sampled, see **Appendix C**.

Table 1 summarizes ACM identified in the building surveyed by MTNW. Friability was determined by conditions observed during the survey and by how the material behaves during mechanical demolition.

Table 1. Summary of Asbestos-Containing Materials

Material Location	Material Description	Asbestos Content	Friability and Condition	Material Quantity[1]
Kitchen	Tan terrazzo pattern sheet vinyl flooring	49-51% Chrysotile	Friable Fair	150 SF
Exterior at siding/foundation	Black asphaltic sealant	4-5% Chrysotile	Non-friable Fair	TBD

[1] Material quantity is approximate. SF=square feet.

Note: This table is not to be used without the complete survey document including appendices for additional information. Material quantity is approximate, bidders shall field verify conditions and quantities prior to providing a bid for removal.

The following sections summarize the potential ACMs identified by homogeneous material (HM) description as they relate to each of the AHERA categories and clarify location along with the number of samples collected for regulatory compliance.

Surfacing Materials

The warehouse building is metal framed, and the office is wood framed, and both were without spray applied fireproofing systems.

- Sandy texture on GWB (HM-01). This texture material was present in one of the restrooms and was less than 1,000 SF. Three samples were collected and analyzed for asbestos content; no asbestos was detected.

Thermal System Insulation

- Pipe systems for domestic water service were visible at the hot water heater in the kitchen and were not insulated.
- Wall and ceiling insulation (HM-10). Ceiling and wall insulation, which was visible throughout the warehouse, was visually determined fiberglass and not suspect for asbestos content; however, the paper that was glued was sampled and tested for asbestos content; no asbestos was detected.

Miscellaneous Materials

- GWB system (HM-02). A portion of the walls on the west end of the warehouse had un-textured GWB painted white. Three full depth samples were collected from corners where the joint compound was located and analyzed for asbestos content; no asbestos was detected.
- GWB ceiling panels (HM-03). Ceilings in the office section were finished with GWB panels painted white, they were sitting on wood framing and did not have joint compound. Three full depth samples were collected and analyzed for asbestos content; no asbestos was detected.
- Tan carpet glue (HM-04). Carpeting in the office area was glued to concrete substrates with this older tan glue. Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- **Tan terrazzo pattern sheet vinyl flooring (HM-05).** This older sheet vinyl flooring material was present in the kitchen area and is also underneath the multi-color square pattern sheet vinyl flooring (kitchen area only). Sampling of the multi-color vinyl flooring in the bathroom did not reveal another layer underneath and the hallway way termination point did not show another layer. Three samples were collected and analyzed for asbestos content; **49 – 51% Chrysotile** asbestos was detected.

- Multi-color square pattern sheet vinyl flooring (HM-06). This newer sheet vinyl flooring material was present in the kitchen (over the tan terrazzo pattern sheet vinyl), hallway and bathroom areas. Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- Brown 4-inch cove base and white adhesive (HM-07). This floor/wall finish cove material was present throughout the office area. Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- Brown 6-inch cove base and clear adhesive (HM-08). This floor/wall finish cove material was present on the GWB in the warehouse space. Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- Floor leveling compound (HM-09). White floor leveling compound was observed in various locations under the carpeting in the office area. Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- Snow coat and black asphaltic sealant (HM-11). Roof penetrations and duct systems were sealed with these two products that were applied to each other (black sealant on the substrate and then the snow coat over the black sealant). Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- Rolled bituminous roofing (HM-12). Roofing on the office building consisted of this roofing material on wood substrate. Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- Metal siding caulk (HM-13). This caulking was observed at the south side of the warehouse where the metal siding connects with the roof system for the office building. Three samples were collected and analyzed for asbestos content; no asbestos was detected.
- **Black asphaltic metal siding sealant (HM-14).** This material had oozed from below the metal siding on the southwest corner of the warehouse building; it was not observed on the rest of the building. Three samples were collected and analyzed for asbestos content; **4% Chrysotile asbestos** was detected.
- New floating floor. At the entrance to the warehouse there is a wood fax floating floor system that does not have adhesive or suspect asbestos content. No samples of this material were collected.

Table 2 lists all suspect materials sampled that have been determined to be non-asbestos containing.

Table 2. Summary of Suspect Materials Determined Non-Asbestos Containing

Material Description	Location
Sandy textured GWB system	Office restroom
GWB system	Walls in warehouse
GWB ceiling panels	Office area
Tan carpet glue	Carpeting in office area

Material Description	Location
Multi-color square pattern sheet vinyl flooring	Offices, hallway and restroom
Brown 4-inch cove base and adhesive	Office area on wood paneling and GWB walls
Brown 6-inch cove base and adhesive	Warehouse at GWB walls
Floor leveling compound	Office area
Paper glue on fiberglass batt insulation	Warehouse
Snow coat and black asphaltic sealant	Roof and HVAC roof ducts
Rolled bituminous roofing	Roof
Metal siding caulk	Roof at warehouse/office interface

Note: This table is not to be used without the complete survey document including appendices for additional information.

Lead-Based Paint Summary

Lead was commonly used in most paint products until 1978, when it was banned from residential paints at concentrations greater than 600 parts per million (ppm) and then reduced to 90 ppm in 2012; however, commercial applications with lead were still utilized and are still available. Lead is poisonous to the human body and presents a potential health hazard during any kind of disturbance (such as maintenance, including grinding, welding, and cutting) and if improperly disposed, where lead can enter drinking water supplies.

EPA defines LBP as a concentration of 1.0 milligrams per centimeter squared (mg/cm^2) or greater by X-Ray fluorescence (XRF) or 0.5 percent by weight (% wt.) or greater by total lead analysis; equivalent to 5,000 milligrams per kilogram (mg/kg). This EPA action level triggers requirements for protection of the environment, maintenance workers, and building occupants in child occupied facilities as defined by 40 CFR 745. Additionally, building components exceeding EPA lead levels may cause demolition waste streams to fail waste designation sampling performed for compliance with WAC 173-303.

The Washington Department of Occupational Safety and Health (DOSH) worker protection regulations has not defined a minimum concentration for regulating lead and has clarified that lead at any detectable concentration shall be considered regulated by WAC 296-155-176, Lead. Paint sample results can be expressed in mg/kg (same as ppm), % wt. or mg/cm^2 by area depending on the type of analytical methods used. Any positive result, regardless of the reporting method by the laboratory, will require compliance with WAC 296-155-176.

Lead in Painted Surfaces

Interior and exterior painted surfaces were tested for LBP using bulk sample collection and chemical analysis. Four (4) paint chip samples were collected from the interior and exterior. Analytical results are provided in **Table 3** below.

Table 3. Summary of Bulk Paint Chip Sample Results

Sample Number	Location	Component	Substrate	Color	Result (ppm)
8998.1-JH-01Pb	Office	Wall	Paneling	White	<80
8998.1-JH-02Pb	Office	Ceiling	GWB	White	<80
8998.1-JH-03Pb	Office exterior	Wall	Wood	Tan	**6300**
8998.1-JH-04Pb	Office exterior	Wall	Wood	Tan	**5400**

Bolded values – bulk paint chip samples with lead detected above the laboratory reporting limit have been bolded. DOSH worker protection regulations have stated that lead at any detectable concentration shall be considered regulated WAC 296-155-176, Lead.

Waste Designation Survey

Waste designation relating to lead-based paint was not performed due to occupancy and unknown paint chip sample data. Sample results in Table 3 indicate waste streams are likely to fail waste designation for lead toxicity even if disposed as a single waste stream (i.e., not comingled with all construction debris).

Other Hazardous Building Materials

Chlorofluorocarbons

MTNW inspected the building for cooling systems with potential chlorofluorocarbons (CFCs); all of the heat pumps have CFC systems.

PCB Light Ballasts and Fluorescent Light Tubes

Older fluorescent light ballasts have small capacitors that may contain high concentrations of PCBs. Nearly all ballasts manufactured before 1979 contain PCBs. All ballasts manufactured after July 1, 1978 that do not contain PCBs are required to be clearly marked "No PCBs". Unmarked ballasts or ballasts without a date code should be assumed to be PCB ballasts. PCBs are toxic chemicals according to the EPA. While there is only a small amount, about one ounce, of PCBs in each light ballast capacitor, there are a large number of ballasts in the United States. About half of the one billion ballasts, estimated as currently installed, were manufactured before 1979 and usually contain PCBs. A "No PCB" label means there are less than 50 ppm PCBs however, in the state of Washington PCB in oils are regulated at 2 ppm (WAC 173-303-9904). Ballasts manufactured after 1978/79 may contain a PCB replacement called Di (2-ethylhexyl) phthalate (DEHP), a probable human carcinogen. DEHP, a clear, odorless, synthetic compound, is often used as a plasticizer. By 1985, most manufacturers had stopped using DEHP in ballasts for 4-foot fixtures but continued to use it for most 8-foot and high intensity discharge fixtures until 1991. In any case, ballasts should not be disassembled for disposal but collected and sent to a treatment, storage or disposal facility certified by the state/EPA for disposal of PCBs and/or DEHP.

Fluorescent light fixtures were the primary lighting fixture observed throughout the building and these were obviously newer and not likely to have PCB or DEHP ballasts. These fixtures were not inspected for the presence of PCB light ballasts due to being in use and Ecology's

recommendation to properly manage all light ballasts. Med-Tox Northwest recommends collection and disposal/recycling of all ballasts scheduled for removal or replacement. All fluorescent light tubes are assumed to contain mercury regardless of construction year. Additionally, exit lights, high intensity discharge (HID) lamps, smoke and heat detectors, and fire extinguishers may be regulated as universal or hazardous waste and will require dismantling and special handling if removed.

68 4-foot with 4-bulbs in the warehouse.

15 4-foot with 4-bulbs in the office space

Five 4-foot with 2-bulbs.

The office lights are older and assumed to have PCB containing ballasts.

There are 4 emergency lights with recyclable batteries, three with lighted exit signs that will require recycling.

PCBs in Building Materials

PCBs were used in paint and caulk formulations as drying oils (resins) and plasticizers or softening agents (liquids). Concrete surfaces and equipment, as well as marine or waterproofing applications, used at Federal installations and in the manufacturing and industrial sectors may have painted surfaces containing PCBs.

PCBs were tested in representative materials on the exterior of the building. **Table 4** below provides a summary of PCB sample results.

Table 4. Summary of PCB Sample Results.

Sample Number	Location	Material	Result (mg/kg)
8998.1-JH-01PCB	Office interior	White paint	0.93
8998.1-JH-02PCB	Office exterior	Tan paint	ND

ND= none detected.

Mercury Containing Switches

Heating system thermostats were investigated for mercury; all observed thermostats were electronic and without mercury vials.

Laboratory Analytical Methods

Asbestos-Containing Materials

Bulk samples were analyzed by Polarized Light Microscopy (PLM) dispersion staining EPA Method 600/R-93/116 by Seattle Asbestos Test, LLC. (SAT). SAT is accredited through the National Voluntary Laboratory Accreditation Program (NVLAP) of the U. S. Department of Commerce. This accreditation does not constitute endorsement, but rather a finding of

laboratory competence. The NVLAP participant number for SAT is 200768-0 (certification copies are located in **Appendix D**). Analytical results are in **Appendix E**.

Lead Containing Paint

Bulk paint chip samples were submitted to EMSL Analytical, Inc. (EMSL) for analysis. Paint chip samples were analyzed for lead using atomic absorption spectroscopy (AAS) to determine the presence and concentration of lead. Procedures for analyzing metals are found in the American Society of Testing and Materials (ASTM) D-3335-78 and EPA Method Manual SW-846, Method 6010. (EMSL used SW 846 3050B*/7000B).

Analytical results for paint chip results are provided in **Appendix F**. EMSL's laboratory certification is attached in **Appendix G**.

PCBs

Bulk PCB samples were submitted to On-Site Environmental, Inc., for analysis using gas chromatography (GC) equipped with electron capture detectors (ECD). Samples were analyzed using EPA Method SW-846 8082A. Analytical results are provided in **Appendix H**. On-Site Environmental, Inc. laboratory certification is attached in **Appendix I**.

Sample and Material location drawings are provided in **Appendix J**.

Comments and Recommendations

Asbestos-Containing Materials

MTNW recommends that this survey report be placed on-site during demolition and copies provided to the contractor(s) bidding and performing work. WAC 296-62-077 and ORCAA regulations require that the report be on-site and available for review during the entire project duration.

Additional destructive investigation and sampling will be required prior to and during any demolition activities including the following:

1. The doors to the building were not sampled due to fire rating and occupancy. Prior to any activity that will impact the doors, drill into the doors and door frames to determine if suspect fire protection is located inside.
2. Electrical systems were not sampled due to occupancy and electrical hazards.
3. Perform destructive investigation inside wall and ceiling cavities to verify suspect asbestos is not hidden or present prior to demolition.
4. Ceramic wall tiles and adhesive were not tested during the survey due to occupancy. Test adhesives prior to demolition for asbestos content. Ceramic tiles may contain high levels of lead in the glazing.

WAC 296-65 requires ACM be removed by trained and licensed contractors using certified asbestos abatement workers and supervisors (except for deregulated roofing sealants, mastics, and coatings). A 10-day prior notification is also required before abatement can begin. In addition, ORCAA requires notification and fees prior to beginning removal of friable ACM.

MTNW recommends third party oversight of asbestos and demolition activities by an AHERA accredited building inspector to ensure regulatory compliance and completion of the additional destructive methods recommended herein.

Lead-Based Paint

For lead, any percentage of lead in the material should be an assumed risk to human health. All painted surfaces should be assumed to contain at least trace levels of lead in paint, therefore requiring compliance with WAC 296-155-176 during demolition activities or any other disturbance of painted surfaces.

Disposal options are also determined by whether the material contains lead. Recycling facilities may not accept lead-containing wastes even if they pass the leachability test. Based on paint chip sampling results, painted building components are unlikely to fail waste designation sampling. This survey was not performed for compliance with a child occupied facility as defined by 40 CFR 745.

PCB

PCBs were not detected in the building. During demolition, the asbestos abatement contractor should be tasked with dismantling light fixtures, collecting all lighting ballasts for proper disposal, and recycling the light tubes. Ballasts without no-PCB labels are considered PCB-containing and must be disposed as a hazardous waste. No-PCB and DEHP ballasts may designate as Washington Dangerous Waste and should be sent to an EPA licensed facility for proper disposal. If any electronic light ballasts are present, they should be sent to a metal recycler.

Other Hazardous Building Materials

Fluorescent light tubes and/or compact fluorescent lights that contain mercury can be recycled as a universal waste for minimal cost. Any smoke detectors should be collected and recycled/disposed appropriately. CFCs in the rooftop heat pump should be recycled as well.

Limitations

A good faith effort has been made to identify ACM, LBP, and other HBM in preparation for building demolition. This survey was performed for demolition of the building however, due to occupancy, destructive investigation could not be performed. Additional destructive

investigation and sampling will be required depending on inaccessible building systems including mechanical spaces and/or mechanical/electrical system routing.

Sampling was performed consistent with the level of care and skill ordinarily exercised by professionals currently practicing under similar conditions in the area. No other warranty, expressed or implied, is made.

This report has been prepared for the exclusive use of the City of Lacey and its' designates for this project only. The analyses, conclusions, and recommendations presented in this report are based on conditions encountered at the time of our study and our experience and judgment. MTNW cannot be held responsible for interpretation by others of the data contained in this report; any use of this report shall include the entire document. This survey is not intended for use as abatement plans and/or specifications which MTNW recommends for regulatory compliance.

Appendix A
AHERA Building Inspector Certificate

NATEC International, Inc.

National Association of Training and Environmental Consulting

Anaheim, CA | Oakland, CA | Sacramento, CA

ASBESTOS - LEAD - MOLD - HAZWOPER

Certificate of Completion

Jon Havelock

has successfully completed the Online Training Course:

Asbestos Building Inspector Refresher Online Course

Date of Completion:

August 11 2020

P.O.Box 25205 Anaheim, CA 92825-5205 - www.natecintl.com - 800-969-3228

Appendix B
Building and Building System Photographic Documentation

Photo 1: Warehouse main entrance.

Photo 2: Office building.

Photo 3: Roof of office building.

Photo 4: Older fluorescent lights with assumed PCB ballasts.

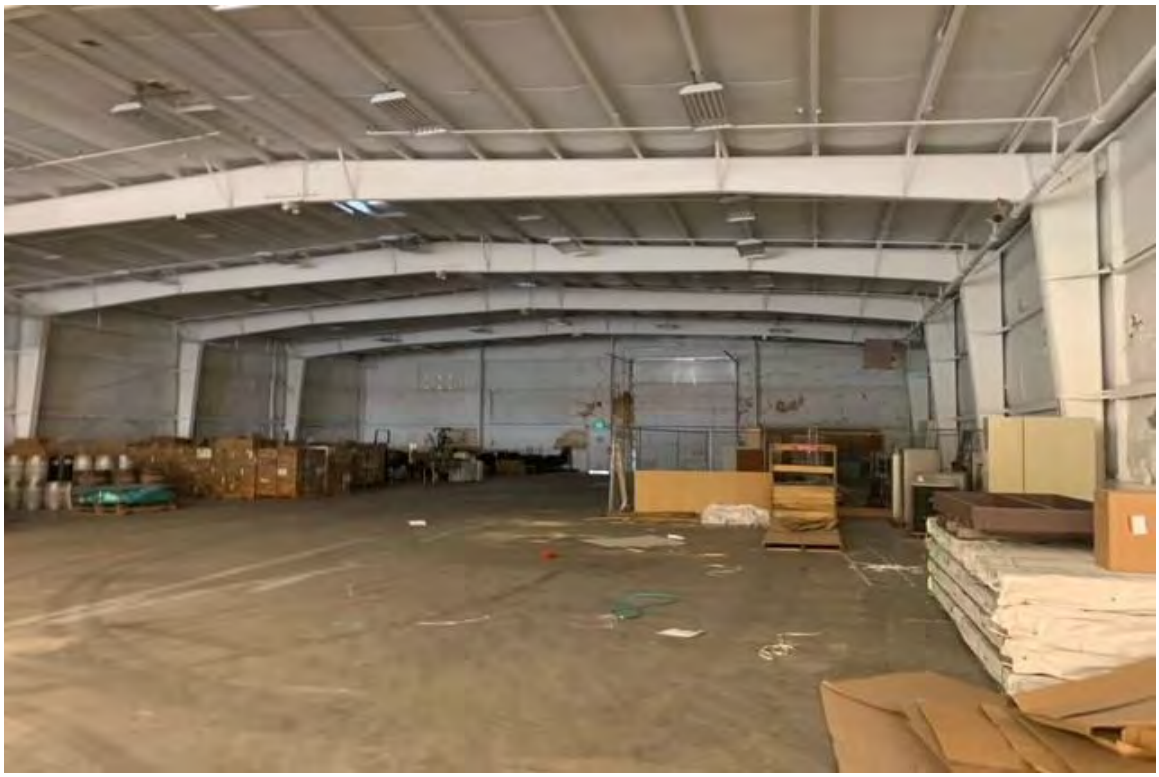


Photo 5: Newer fluorescent lights with electronic ballasts.

Photo 6: Old electrical panel with assumed ACM internals.

Photo 7: Terrazzo pattern ACM sheet vinyl flooring in kitchen. Extends underneath non-ACM sheet vinyl.

Appendix C
Summary of Materials Sampled for Asbestos

Table C-1. Summary of Materials Sampled for Asbestos

Sample	Material	Location	AHERA Type	HM	Result
8998.1-JH-01	Sandy textured GWB system	Restroom	Surfacing	01	ND
8998.1-JH-02	Sandy textured GWB system	Restroom	Surfacing	01	ND
8998.1-JH-03	Sandy textured GWB system	Restroom	Surfacing	01	ND
8998.1-JH-04	GWB system	Warehouse walls	Miscellaneous	02	ND
8998.1-JH-05	GWB system	Warehouse walls	Miscellaneous	02	ND
8998.1-JH-06	GWB system	Warehouse walls	Miscellaneous	02	ND
8998.1-JH-07	GWB panels	Office ceiling	Miscellaneous	03	ND
8998.1-JH-08	GWB panels	Office ceiling	Miscellaneous	03	ND
8998.1-JH-09	GWB panels	Office ceiling	Miscellaneous	03	ND
8998.1-JH-10	Carpet glue – tan	Office floor	Miscellaneous	04	ND
8998.1-JH-11	Carpet glue – tan	Office floor	Miscellaneous	04	ND
8998.1-JH-12	Carpet glue – tan & floor leveling compound	Office floor	Miscellaneous	04 09	ND
8998.1-JH-13	**Tan terrazzo pattern sheet vinyl flooring**	**Kitchen floor**	**Miscellaneous**	**05**	**50% CHR**
8998.1-JH-14	**Tan terrazzo pattern sheet vinyl flooring**	**Kitchen floor**	**Miscellaneous**	**05**	**49% CHR**
8998.1-JH-15	**Tan terrazzo pattern sheet vinyl flooring**	**Kitchen floor**	**Miscellaneous**	**05**	**51% CHR**
8998.1-JH-16	Multi-color square pattern sheet vinyl flooring	Kitchen, hallway and restroom	Miscellaneous	06	ND
8998.1-JH-17	Multi-color square pattern sheet vinyl flooring	Kitchen, hallway and restroom	Miscellaneous	06	ND
8998.1-JH-18	Multi-color square pattern sheet vinyl flooring	Kitchen, hallway and restroom	Miscellaneous	06	ND
8998.1-JH-19	Brown 4-inch cove base and adhesive	Offices	Miscellaneous	07	ND
8998.1-JH-20	Brown 4-inch cove base and adhesive	Offices	Miscellaneous	07	ND
8998.1-JH-21	Brown 4-inch cove base and adhesive	Offices	Miscellaneous	07	ND
8998.1-JH-22	Brown 6-inch cove base and adhesive	Warehouse	Miscellaneous	08	ND
8998.1-JH-23	Brown 6-inch cove base and adhesive	Warehouse	Miscellaneous	08	ND
8998.1-JH-24	Brown 6-inch cove base and adhesive	Warehouse	Miscellaneous	08	ND
8998.1-JH-25	Floor leveling compound	Office floor	Miscellaneous	09	ND
8998.1-JH-26	Floor leveling compound	Office floor	Miscellaneous	09	ND

Sample	Material	Location	AHERA Type	HM	Result
8998.1-JH-27	Paper glue on fiberglass batt insulation	Warehouse walls and ceiling	TSI	10	ND
8998.1-JH-28	Paper glue on fiberglass batt insulation	Warehouse walls and ceiling	TSI	10	ND
8998.1-JH-29	Paper glue on fiberglass batt insulation	Warehouse walls and ceiling	TSI	10	ND
8998.1-JH-30	Snow coat and black asphaltic sealant	HVAC duct system	Miscellaneous	11	ND
8998.1-JH-31	Snow coat and black asphaltic sealant	HVAC duct system	Miscellaneous	11	ND
8998.1-JH-32	Snow coat and black asphaltic sealant	HVAC duct system	Miscellaneous	11	ND
8998.1-JH-33	Rolled bituminous roofing	Roof	Miscellaneous	12	ND
8998.1-JH-34	Rolled bituminous roofing	Roof	Miscellaneous	12	ND
8998.1-JH-35	Metal siding caulk	South exterior	Miscellaneous	13	ND
8998.1-JH-36	Metal siding caulk	South exterior	Miscellaneous	13	ND
8998.1-JH-37	**Black asphaltic metal siding sealant**	**Exterior at foundation**	**Miscellaneous**	**13**	**4% CHR**
8998.1-JH-38	**Black asphaltic metal siding sealant**	**Exterior at foundation**	**Miscellaneous**	**13**	**4% CHR**
8998.1-JH-39	**Black asphaltic metal siding sealant**	**Exterior at foundation**	**Miscellaneous**	**13**	**5% CHR**

Ch = Chrysotile asbestos, ND = none detected

Appendix D
National Voluntary Laboratory Accreditation Program Certificate

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 200768-0

Seattle Asbestos Test, LLC

Lynnwood, WA

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

Asbestos Fiber Analysis

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

2020-10-01 through 2021-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Seattle Asbestos Test, LLC
19701 Scriber Lake Road, Suite 103
Lynnwood, WA 98036
Mr. Fanyao (Steve) Zhang
Phone: 425-673-9850 Fax: 425-673-9810
Email: admin@seattleasbestostest.com
http://www.seattleasbestostest.com

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200768-0

Bulk Asbestos Analysis

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

For the National Voluntary Laboratory Accreditation Program

Appendix E
Analytical Report – Asbestos

SEATTLE ASBESTOS TEST, LLC

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

www.seattleasbestostest.com, admin@seattleasbestostest.com

Project Manager:	Jon Havelock	Date Analyzed:	3/23/2021
Client:	Med-Tox, Northwest	Client Job#:	A-8998.1
Address:	PO Box 1446, Auburn, WA 98071-1446	Project Location:	5700 Lacey Blvd, Lacey, WA
Tel:	253.351.0677	Laboratory batch#:	202109660
Date Report Issued:	3/23/2021	Samples Received:	39

Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory. This report in its entirety consists of this cover leter, the customer sampling COC or data sheet, and the analytical report which is paged numbered.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely

SZhang

Steve (Fanyao) Zhang
Approved Signatory

SEATTLE ASBESTOS TEST, LLC
19711 Scriber Lake Rd. Suite D, Lynnwood, WA 98036
Tel: (425) 673-9850, Fax: (425) 673-9810 Website: seattleasbestostest.com

BATCH # 202109660

CHAIN OF CUSTODY

Analysis Type: Bulk Analysis X Point Count 400 ___ Point Count 1000 ___ Point Count Gravimetric ___

Turn Around Time STD Number of Samples 39 Client Job # **A-8998.1**

Client Name **Med-Tox Northwest**

Address **Post Office Box 1446** City **Auburn** State **WA** Zip **98071-1446**

Phone **253-351-0677** Fax **253-351-0688** Email **havelockj@medtoxnw.com**

Project Location 5700 Lacey Blvd. Lacey, WA Project Manager **Jon A. Havelock**

Sample Condition: Good_____ Damaged_____ Severe Damage(Spillage)_____

SEQ #	SAMPLE ID	SAMPLE DESCRIPTION	Lab ID	Comment	A/R
1	8998.1-JH-01	See attached data sheet			
2	8998.1-JH-02				
3	8998.1-JH-03				
4	8998.1-JH-04				
5	8998.1-JH-05				
6	8998.1-JH-06				
7	8998.1-JH-07				
8	8998.1-JH-08				
9	8998.1-JH-09				
10	8998.1-JH-10				
11	8998.1-JH-11				
12	8998.1-JH-12				
13	8998.1-JH-13				
14	8998.1-JH-14				
15	8998.1-JH-15				

	Print	Signature	Company Name	Date	Time
Sampled by	Jon A. Havelock		Med-Tox Northwest	3/17/2021	1445
Relinquished by	Jon A. Havelock	Jon A. Havelock	Med-Tox Northwest	3/17/2021	1445
Delivered by					
Received by	Angela		SAT	3/18/2021	11:11
Analyzed by			SAT	3/23/21	10:20
Result reported by					

Seattle Asbestos Test warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted, and disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. Seattle Asbestos Test accepts no legal responsibility for the purpose for which the client uses test results. By signing on this form, the clients agree to relieve Seattle Asbestos Test of any liability that may arise from the test results. Late payment may be charged of interest, invoices goes to collection causes 17-25% of collection fee. NSF is $50.

Result Reporting method: Phone_____, Fax_____, Email X, Pick Up Report_____

SEATTLE ASBESTOS TEST, LLC
19711 Scriber Lake Rd. Suite D, Lynnwood, WA 98036
Tel: (425) 673-9850, Fax: (425) 673-9810 Website: seattleasbestostest.com

BATCH # 20210966 0

SEQ #	SAMPLE ID	SAMPLE DESCRIPTION	Lab ID	Comment	A/R
16	8998.1-JH-16	See attached data sheet			
17	8998.1-JH-17				
18	8998.1-JH-18				
19	8998.1-JH-19				
20	8998.1-JH-20				
21	8998.1-JH-21				
22	8998.1-JH-22				
23	8998.1-JH-23				
24	8998.1-JH-24				
25	8998.1-JH-25				
26	8998.1-JH-26				
27	8998.1-JH-27				
28	8998.1-JH-28				
29	8998.1-JH-29				
30	8998.1-JH-30				
31	8998.1-JH-31				
32	8998.1-JH-32				
33	8998.1-JH-33				
34	8998.1-JH-34				
35	8998.1-JH-35				
36	8998.1-JH-36				
37	8998.1-JH-37				
38	8998.1-JH-38				
39	8998.1-JH-39				

Result Reporting method: Phone_____, Fax_____, Email_____, Pick Up Report_____

Table B-1. Summary of Materials Sampled for Asbestos

Sample	Material	Location	AHERA Type	HM	Result
8998.1-JH-01	Sandy textured GWB system	Restroom	Surfacing	01	
8998.1-JH-02	Sandy textured GWB system	Restroom	Surfacing	01	
8998.1-JH-03	Sandy textured GWB system	Restroom	Surfacing	01	
8998.1-JH-04	GWB system	Warehouse walls	Miscellaneous	02	
8998.1-JH-05	GWB system	Warehouse walls	Miscellaneous	02	
8998.1-JH-06	GWB system	Warehouse walls	Miscellaneous	02	
8998.1-JH-07	GWB panels	Office ceiling	Miscellaneous	03	
8998.1-JH-08	GWB panels	Office ceiling	Miscellaneous	03	
8998.1-JH-09	GWB panels	Office ceiling	Miscellaneous	03	
8998.1-JH-10	Carpet glue – tan	Office floor	Miscellaneous	04	
8998.1-JH-11	Carpet glue – tan	Office floor	Miscellaneous	04	
8998.1-JH-12	Carpet glue – tan & floor leveling compound	Office floor	Miscellaneous	04 09	
8998.1-JH-13	Tan terrazzo pattern sheet vinyl flooring	Kitchen floor	Miscellaneous	05	
8998.1-JH-14	Tan terrazzo pattern sheet vinyl flooring	Kitchen floor	Miscellaneous	05	
8998.1-JH-15	Tan terrazzo pattern sheet vinyl flooring	Kitchen floor	Miscellaneous	05	
8998.1-JH-16	Multi-color square pattern sheet vinyl flooring	Kitchen, hallway and restroom	Miscellaneous	06	
8998.1-JH-17	Multi-color square pattern sheet vinyl flooring	Kitchen, hallway and restroom	Miscellaneous	06	
8998.1-JH-18	Multi-color square pattern sheet vinyl flooring	Kitchen, hallway and restroom	Miscellaneous	06	
8998.1-JH-19	Brown 4-inch cove base and adhesive	Offices	Miscellaneous	07	
8998.1-JH-20	Brown 4-inch cove base and adhesive	Offices	Miscellaneous	07	
8998.1-JH-21	Brown 4-inch cove base and adhesive	Offices	Miscellaneous	07	
8998.1-JH-22	Brown 6-inch cove base and adhesive	Warehouse	Miscellaneous	08	
8998.1-JH-23	Brown 6-inch cove base and adhesive	Warehouse	Miscellaneous	08	
8998.1-JH-24	Brown 6-inch cove base and adhesive	Warehouse	Miscellaneous	08	
8998.1-JH-25	Floor leveling compound	Office floor	Miscellaneous	09	
8998.1-JH-26	Floor leveling compound	Office floor	Miscellaneous	09	

Sample	Material	Location	AHERA Type	HM	Result
8998.1-JH-27	Paper glue on fiberglass batt insulation	Warehouse walls and ceiling	TSI	10	
8998.1-JH-28	Paper glue on fiberglass batt insulation	Warehouse walls and ceiling	TSI	10	
8998.1-JH-29	Paper glue on fiberglass batt insulation	Warehouse walls and ceiling	TSI	10	
8998.1-JH-30	Snow coat and black asphaltic sealant	HVAC duct system	Miscellaneous	11	
8998.1-JH-31	Snow coat and black asphaltic sealant	HVAC duct system	Miscellaneous	11	
8998.1-JH-32	Snow coat and black asphaltic sealant	HVAC duct system	Miscellaneous	11	
8998.1-JH-33	Rolled bituminous roofing	Roof	Miscellaneous	12	
8998.1-JH-34	Rolled bituminous roofing	Roof	Miscellaneous	12	
8998.1-JH-35	Metal siding caulk	South exterior	Miscellaneous	13	
8998.1-JH-36	Metal siding caulk	South exterior	Miscellaneous	13	
8998.1-JH-37	Black asphaltic metal siding sealant	Exterior at foundation	Miscellaneous	13	
8998.1-JH-38	Black asphaltic metal siding sealant	Exterior at foundation	Miscellaneous	13	
8998.1-JH-39	Black asphaltic metal siding sealant	Exterior at foundation	Miscellaneous	13	

Ch = Chrysotile asbestos, ND = none detected, PC = PLM by point count (400 points)

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials [PLM]

Attn.: Jon Havelock **Client:** Med-Tox, Northwest **Address:** PO Box 1446, Auburn, WA 98071-1446

Job#: A-8998.1 **Batch#:** 202109660 **Date Received:** 3/18/2021

Samples Rec'd: 39 **Date Analyzed:** 3/23/2021 **Samples Analyzed:** 39

Project Loc.: 5700 Lacey Blvd, Lacey, WA

Analyzed by: Cassie Huang

Approved Signatory: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	8998.1-JH-01	1	White powdery material with paint and paper		**None detected**	Binder/filler, Paint	35	Cellulose
		2	Off-white chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	23	Cellulose
2	8998.1-JH-02	1	White powdery material with paint and paper		**None detected**	Binder/filler, Paint	34	Cellulose
		2	Off-white chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	25	Cellulose
3	8998.1-JH-03	1	White powdery material with paint and paper		**None detected**	Binder/filler, Paint	35	Cellulose
		2	Off-white chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	26	Cellulose
4	8998.1-JH-04	1	White powdery material with paint and paper		**None detected**	Binder/filler, Paint	35	Cellulose
		2	Off-white chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	28	Cellulose
5	8998.1-JH-05	1	White powdery material with paint and paper		**None detected**	Binder/filler, Paint	37	Cellulose
		2	Off-white chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	22	Cellulose
6	8998.1-JH-06	1	White powdery material with paint and paper		**None detected**	Binder/filler, Paint	31	Cellulose
		2	Off-white chalky material with paper		**None detected**	Binder/filler, Gypsum/binder	23	Cellulose
7	8998.1-JH-07	1	White chalky material with paint and paper		**None detected**	Binder/filler, Gypsum/binder, Paint	36	Cellulose
8	8998.1-JH-08	1	White chalky material with paint and paper		**None detected**	Binder/filler, Gypsum/binder, Paint	35	Cellulose
9	8998.1-JH-09	1	White chalky material with paint and paper		**None detected**	Binder/filler, Gypsum/binder, Paint	32	Cellulose
10	8998.1-JH-10	1	Tan mastic		**None detected**	Mastic/binder	5	Synthetic fibers, Cellulose
11	8998.1-JH-11	1	Tan mastic		**None detected**	Mastic/binder	7	Synthetic fibers, Cellulose
12	8998.1-JH-12	1	Tan mastic		**None detected**	Mastic/binder	6	Synthetic fibers, Cellulose
		2	Trace gray brittle material		**None detected**	Filler, Binder	2	Cellulose
13	8998.1-JH-13	1	Tan sheet vinyl		**None detected**	Vinyl/binder		None detected

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials [PLM]

Attn.: Jon Havelock **Client:** Med-Tox, Northwest **Address:** PO Box 1446, Auburn, WA 98071-1446

Job#: A-8998.1 **Batch#:** 202109660 **Date Received:** 3/18/2021

Samples Rec'd: 39 **Date Analyzed:** 3/23/2021 **Samples Analyzed:** 39

Project Loc.: 5700 Lacey Blvd, Lacey, WA

Analyzed by: Cassie Huang

Approved Signatory: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		2	Gray fibrous material with mastic	**50**	**Chrysotile**	Binder/filler, Mastic/binder	35	Cellulose
14	8998.1-JH-14	1	Tan sheet vinyl		**None detected**	Vinyl/binder		None detected
		2	Gray fibrous material with mastic	**49**	**Chrysotile**	Binder/filler, Mastic/binder	33	Cellulose
15	8998.1-JH-15	1	Tan sheet vinyl		**None detected**	Vinyl/binder		None detected
		2	Gray fibrous material with mastic	**51**	**Chrysotile**	Binder/filler, Mastic/binder	36	Cellulose
16	8998.1-JH-16	1	Multi-color sheet vinyl		**None detected**	Vinyl/binder		None detected
		2	Yellow mastic		**None detected**	Mastic/binder	3	Cellulose
		3	Trace gray brittle material		**None detected**	Filler, Binder	2	Cellulose
17	8998.1-JH-17	1	Multi-color sheet vinyl		**None detected**	Vinyl/binder		None detected
		2	Yellow mastic		**None detected**	Mastic/binder	2	Cellulose
		3	Gray brittle material		**None detected**	Filler, Binder	4	Cellulose
18	8998.1-JH-18	1	Multi-color sheet vinyl		**None detected**	Vinyl/binder		None detected
		2	Yellow mastic		**None detected**	Mastic/binder	3	Cellulose
		3	Gray brittle material		**None detected**	Filler, Binder	5	Cellulose
19	8998.1-JH-19	1	Brown rubbery material		**None detected**	Rubber/binder	2	Cellulose
		2	White mastic		**None detected**	Mastic/binder	3	Cellulose
20	8998.1-JH-20	1	Brown rubbery material		**None detected**	Rubber/binder	2	Cellulose
		2	White mastic		**None detected**	Mastic/binder	2	Cellulose
21	8998.1-JH-21	1	Brown rubbery material		**None detected**	Rubber/binder	2	Cellulose
		2	White mastic		**None detected**	Mastic/binder	3	Cellulose
22	8998.1-JH-22	1	Brown rubbery material		**None detected**	Rubber/binder	2	Cellulose
		2	Brown mastic		**None detected**	Mastic/binder	4	Cellulose
23	8998.1-JH-23	1	Brown rubbery material		**None detected**	Rubber/binder	3	Cellulose

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

Disclaimer: This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government.

ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials [PLM]

Attn.: Jon Havelock **Client:** Med-Tox, Northwest **Address:** PO Box 1446, Auburn, WA 98071-1446

Job#: A-8998.1 **Batch#:** 202109660 **Date Received:** 3/18/2021

Samples Rec'd: 39 **Date Analyzed:** 3/23/2021 **Samples Analyzed:** 39

Project Loc.: 5700 Lacey Blvd, Lacey, WA

Analyzed by: Cassie Huang

Approved Signatory: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
24	8998.1-JH-24	1	Brown rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Brown mastic		None detected	Mastic/binder	2	Cellulose
25	8998.1-JH-25	1	White brittle material		None detected	Filler, Binder	4	Cellulose
		2	Trace yellow mastic		None detected	Mastic/binder	3	Cellulose
26	8998.1-JH-26	1	White brittle material		None detected	Filler, Binder	2	Cellulose
		2	Trace yellow mastic		None detected	Mastic/binder	3	Cellulose
27	8998.1-JH-27	1	White soft/elastic material		None detected	Binder, Filler	4	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
		3	Yellow fibrous material		None detected	Filler	90	Glass fibers
28	8998.1-JH-28	1	White soft/elastic material		None detected	Binder, Filler	4	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Yellow fibrous material		None detected	Filler	88	Glass fibers
29	8998.1-JH-29	1	White soft/elastic material		None detected	Binder, Filler	3	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
		3	Yellow fibrous material		None detected	Filler	91	Glass fibers
30	8998.1-JH-30	1	White soft/elastic material		None detected	Binder, Filler	3	Cellulose
		2	Trace silver paint		None detected	Paint, Filler	4	Cellulose
		3	Black asphaltic material		None detected	Asphalt/binder	7	Cellulose
31	8998.1-JH-31	1	White soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	Trace silver paint		None detected	Paint, Filler	3	Cellulose
		3	Black asphaltic material		None detected	Asphalt/binder	6	Cellulose
32	8998.1-JH-32	1	White soft/elastic material		None detected	Binder, Filler	3	Cellulose
		2	Trace silver paint		None detected	Paint, Filler	5	Cellulose

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

[PLM] EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples; EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials **[PLM]**

Attn.: Jon Havelock **Client:** Med-Tox, Northwest **Address:** PO Box 1446, Auburn, WA 98071-1446

Job#: A-8998.1 **Batch#:** 202109660 **Date Received:** 3/18/2021

Samples Rec'd: 39 **Date Analyzed:** 3/23/2021 **Samples Analyzed:** 39

Project Loc.: 5700 Lacey Blvd, Lacey, WA

Analyzed by: Cassie Huang

Approved Signatory: SZhang Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		3	Black asphaltic material		**None detected**	Asphalt/binder	7	Cellulose
33	8998.1-JH-33	1	Black asphaltic material with sand		**None detected**	Asphalt/binder, Sand	25	Cellulose
34	8998.1-JH-34	1	Black asphaltic material with sand		**None detected**	Asphalt/binder, Sand	22	Cellulose
35	8998.1-JH-35	1	White soft/elastic material		**None detected**	Binder, Filler	4	Cellulose
36	8998.1-JH-36	1	White soft/elastic material		**None detected**	Binder, Filler	4	Cellulose
37	8998.1-JH-37	1	Black asphaltic material with trace paint	**4**	**Chrysotile**	Asphalt/binder, Paint, Gravel	3	Cellulose
38	8998.1-JH-38	1	Black asphaltic material with trace paint	**4**	**Chrysotile**	Asphalt/binder, Paint, Gravel	4	Cellulose
39	8998.1-JH-39	1	Black asphaltic material with trace paint	**5**	**Chrysotile**	Asphalt/binder, Paint, Gravel	6	Cellulose

Appendix F
Analytical Report – Lead

EMSL Analytical, Inc.
6340 CastlePlace Dr., Indianapolis, IN 46250
Phone/Fax: (317) 803-2997 / (317) 803-3047
http://www.EMSL.com indianapolislab@emsl.com

EMSL Order:	162105153
CustomerID:	MEDT50
CustomerPO:	8998.1
ProjectID:	

Attn: **Jon A. Havelock**
Med-Tox Northwest
PO Box 1446
Auburn, WA 98071

Phone:	(253) 351-0677
Fax:	(253) 351-0688
Received:	3/18/2021 09:32 AM
Collected:	3/17/2021

Project: **5700 Lacy Blvd SE/8998.1**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample	*Description*	*Collected*	*Analyzed*	*Weight*	*RDL*	*Lead Concentration*
8998.1-JH-01Pb *162105153-0001*	Site: Office Wall Paneling White	3/17/2021	3/24/2021	0.2543 g	80 ppm	<80 ppm
8998.1-JH-02Pb *162105153-0002*	Site: Office Ceiling GWB White	3/17/2021	3/24/2021	0.2532 g	80 ppm	<80 ppm
8998.1-JH-03Pb *162105153-0003*	Site: Office Exterior Wall Wood Tan	3/17/2021	3/24/2021	0.2591 g	800 ppm	6300 ppm
8998.1-JH-04Pb *162105153-0004*	Site: Office Exterior Wall Wood Tan	3/17/2021	3/24/2021	0.2592 g	800 ppm	5400 ppm

Allison Ford

Allison Ford, Chemistry Lab Manager
or other approved signatory

Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC--ELLAP 157245, OH E10040

Initial report from 03/25/2021 07:50:26

EMSL Analytical, Inc.
2001 East 52nd Street

Indianapolis, IN 46205
PHONE (317) 803-2997
FAX. (317) 803-3047

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only).*

162105153

Company : Med-Tox Northwest	**EMSL-Bill to:** ☐ Different ☑ Same If Bill to is Different note instructions in Comments**
Street: Post Office Box 1446	*Third Party Billing requires written authorization from third party*
City: Auburn **State/Province:** WA	**Zip/Postal Code:** 98071-1446 **Country:** United States
Report To (Name): Jon Havelock	**Telephone #:** 253-351-0677
Email Address: havelockj@medtoxnw.com	**Fax #:** 253-351-0688 **Purchase Order:** 8998 1
Project Name/Number: 5700 Lacv Blvd SE/8998.1	**Please Provide Results:** ☐ FAX ☑ E-mail ☐ Mail
U.S. State Samples Taken: WA	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☐ % by wt. ☐ mg/cm² ☒ ppm	SW846-7000B	Flame Atomic Absorption	0.01%	☒
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	☐
Wipe* ASTM ☐ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	☐
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	☐
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe	☐
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200 9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	EPA 200 9	Graphite Furnace AA	0 003 mg/L (ppm)	☐
	EPA 200 8	ICP-MS	0 001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter	☐
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	☐
Other:				☐

Name of Sampler: Jon A. Havelock, CSP, CHMM **Signature of Sampler:** Jon A. Havelock

Sample #	Location	Volume/Area	Date/Time Sampled
* -01Pb	See attached data sheet		3/17/21 @ 1300
-02Pb			
-03Pb			
-04Pb			

Client Sample #'s 01Pb - 04Pb **Total # of Samples:** 4

Relinquished (Client): Jon A. Havelock **Date:** 3/17/2021 **Time:** 1445

Received (Lab): SG **Date:** 3.18.21 **Time:** 9:32

Comments:
Please report results in parts per million.

* All sample number preceded by 8998.1-JH

Page 1 of 1 pages

Table 4. Summary of Bulk Paint Chip Sample Results

Sample Number	Location	Component	Substrate	Color	Result (ppm)
8998.1-JH-01Pb	Office	Wall	Paneling	White	
8998.1-JH-02Pb	Office	Ceiling	GWB	White	
8998.1-JH-03Pb	Office exterior	Wall	Wood	Tan	
8998.1-JH-04Pb	Office exterior	Wall	Wood	Tan	

Bolded values – bulk paint chip samples with lead detected above the laboratory reporting limit have been bolded. DOSH worker protection regulations have stated that lead at any detectable concentration shall be considered regulated WAC 296-155-176, Lead.

Appendix G
EMSL Laboratory Certification

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical, Inc.

6340 Castleplace Drive, Indianapolis, IN 46250

Laboratory ID: 157245

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2017 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: June 01, 2021
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: June 01, 2021
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: June 01, 2021
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 17 – 09/11/2018

Date Issued: 05/31/2019

AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
6340 Castleplace Drive, Indianapolis, IN 46250

Laboratory ID: **157245**
Issue Date: 05/31/2019

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 09/01/2002

Field of Testing (FoT)	Technology sub-type/ Detector	Method	Method Description (*for internal methods only*)
Paint		EPA SW-846 3050B	
		EPA SW-846 3051A	
		EPA SW-846 7000B	
Soil		EPA SW-846 3050B	
		EPA SW-846 3051A	
		EPA SW-846 7000B	
Settled Dust by Wipe		EPA SW-846 3050B	
		EPA SW-846 3051A	
		EPA SW-846 7000B	
Airborne Dust		EPA SW-846 3050B	
		EPA SW-846 3051A	
		EPA SW-846 7000B	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Appendix H
Analytical Report – PCB

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 23, 2021

Jon Havelock
MED-TOX Northwest
P.O. Box 1146
Auburn, WA 98071

Re: Analytical Data for Project 8998.1
Laboratory Reference No. 2103-214

Dear Jon:

Enclosed are the analytical results and associated quality control data for samples submitted on March 18, 2021.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 23, 2021
Samples Submitted: March 18, 2021
Laboratory Reference: 2103-214
Project: 8998.1

Case Narrative

Samples were collected on March 17, 2021 and received by the laboratory on March 18, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 23, 2021
Samples Submitted: March 18, 2021
Laboratory Reference: 2103-214
Project: 8998.1

PCBs EPA 8082A

Matrix: Solid
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**8998.1-JH-01PCB**					
Laboratory ID:	03-214-01					
Aroclor 1016	**ND**	0.68	EPA 8082A	3-19-21	3-22-21	
Aroclor 1221	**ND**	0.68	EPA 8082A	3-19-21	3-22-21	
Aroclor 1232	**ND**	0.68	EPA 8082A	3-19-21	3-22-21	
Aroclor 1242	**ND**	0.68	EPA 8082A	3-19-21	3-22-21	
Aroclor 1248	**ND**	0.68	EPA 8082A	3-19-21	3-22-21	
Aroclor 1254	**0.93**	0.68	EPA 8082A	3-19-21	3-22-21	
Aroclor 1260	**ND**	0.68	EPA 8082A	3-19-21	3-22-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*97*	*46-125*				
Client ID:	**8998.1-JH-02PCB**					
Laboratory ID:	03-214-02					
Aroclor 1016	**ND**	0.84	EPA 8082A	3-19-21	3-22-21	
Aroclor 1221	**ND**	0.84	EPA 8082A	3-19-21	3-22-21	
Aroclor 1232	**ND**	0.84	EPA 8082A	3-19-21	3-22-21	
Aroclor 1242	**ND**	0.84	EPA 8082A	3-19-21	3-22-21	
Aroclor 1248	**ND**	0.84	EPA 8082A	3-19-21	3-22-21	
Aroclor 1254	**ND**	0.84	EPA 8082A	3-19-21	3-22-21	
Aroclor 1260	**ND**	0.84	EPA 8082A	3-19-21	3-22-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*105*	*46-125*				

Date of Report: March 23, 2021
Samples Submitted: March 18, 2021
Laboratory Reference: 2103-214
Project: 8998.1

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Solid
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	3-19-21	3-22-21	
Aroclor 1221	**ND**	0.050	EPA 8082A	3-19-21	3-22-21	
Aroclor 1232	**ND**	0.050	EPA 8082A	3-19-21	3-22-21	
Aroclor 1242	**ND**	0.050	EPA 8082A	3-19-21	3-22-21	
Aroclor 1248	**ND**	0.050	EPA 8082A	3-19-21	3-22-21	
Aroclor 1254	**ND**	0.050	EPA 8082A	3-19-21	3-22-21	
Aroclor 1260	**ND**	0.050	EPA 8082A	3-19-21	3-22-21	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*46-125*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0319S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.495**	**0.511**	0.500	0.500	N/A	**99**	**102**	50-134	3	18	
Surrogate:											
DCB						*95*	*95*	*46-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Med-Tox Northwest
Project Number: 8998.1
Project Name: 5700 Lacy Blvd SE
Project Manager: Jon A. Havelock
Sampled by: Jon A. Havelock

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-214

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664						% Moisture
1	8998.1-JH-01PCB	3/17	1300	Bulk	1									X												
2	8998.1-JH-02PCB	"	"	"	↓									X												

	Signature	Company	Date	Time
Relinquished	Jon A. Havelock	Med-Tox Northwest	3/17/2021	1445
Received	[illegible]	OSE	3/18/21	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
havelockj@medtoxnw.com
Post Office Box 1446
Auburn, Wa 98071-1446

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

Appendix I
OnSite Environmental Laboratory Accreditation

The State of Washington Department of Ecology

OnSite Environmental, Inc.

Redmond, WA

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

This certificate is effective July 27, 2020 and shall expire July 26, 2021.

Witnessed under my hand on July 23, 2020.

Rebecca Wood
Lab Accreditation Unit Supervisor

Laboratory ID
C591

Appendix J
Sample Location Drawings

PART 1 - GENERAL

1.01 WORK COVERED BY THE CONTRACT DOCUMENTS

A. Briefly and without force and effect upon the contract documents, the work of the contract includes all labor, materials, vehicles, services, insurance, special permits and equipment necessary to demolition of an existing warehouse building and attached office space for the purpose of clearing the existing property for the construction of a new museum and event center with new parking lots under a separate bid package.

1. The existing warehouse is an existing metal building with an existing concrete slab on grade foundation system. The existing attached office space is an existing wood construction building with concrete slab on grade foundation. All building elements are to be removed and include, but not limited to, all roofs and framing members, exterior walls and framing members, interior walls and framing members, doors, windows, storefronts, casework, plumbing fixtures, lighting fixtures, electrical panels, electrical switches, electrical receptacles, data and telecommunication ports, exterior overhead main power line and communication lines, mechanical units, ductwork, vents, louvers, natural gas lines and gas meter, sprinkler system, fire alarm system, security system, all existing concrete slab on grade and foundation system, under slab vapor barriers, under slab water lines, under slab drain/sewer lines.
2. This project also involves site demolition and site grading. Site demolition includes all concrete and asphalt paved parking lots, gravel lots, concrete curbs, bollards, retaining walls, sections of the existing sidewalk in the public right-of-way, all existing underground and overhead utilities and building services, existing landscaping, trees and bushes.
3. The existing site is to be cleared of all existing building elements and site elements and amenities.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 GENERAL

1.01 INADVERTENT DISCOVERY PLAN

A. In the event of inadvertent discovery of archaeological resources such as, but not limited to, human remains, funerary objects, sacred objects, artifacts, or objects of cultural significance, all work shall stop and the procedures outlined in the attached "INADVERTENT DISCOVERY PLAN" document immediately following this sheet shall be performed.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

INADVERTENT DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS

To request ADA accommodation, including materials in a format for the visually impaired, call Ecology at 360-407-6000 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with a speech disability may call TTY at 877-833-6341.

Site Name(s): _____ Location: _____

Project Lead/Organization: _____ County: _____

If this Inadvertent Discovery Plan (IDP) is for multiple (batched) projects, ensure the location information covers all project areas.

1. INTRODUCTION

The IDP outlines procedures to perform in the event of a discovery of archaeological materials or human remains, in accordance with applicable state and federal laws. An IDP is required, as part of Agency Terms and Conditions for all grants and loans, for any project that creates disturbance above or below the ground. An IDP is not a substitute for a formal cultural resource review (Executive 05-05 or Section 106).

Once completed, **the IDP should always be kept at the project site** during all project activities. All staff, contractors, and volunteers should be familiar with its contents and know where to find it.

2. CULTURAL RESOURCE DISCOVERIES

A cultural resource discovery could be prehistoric or historic. Examples include (see images for further examples):

- An accumulation of shell, burned rocks, or other food related materials.
- Bones, intact or in small pieces.
- An area of charcoal or very dark stained soil with artifacts.
- Stone tools or waste flakes (for example, an arrowhead or stone chips).
- Modified or stripped trees, often cedar or aspen, or other modified natural features, such as rock drawings.
- Agricultural or logging materials that appear older than 50 years. These could include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, and many other items.
- Clusters of tin cans or bottles, or other debris that appear older than 50 years.
- Old munitions casings. ***Always assume these are live and never touch or move.***
- Buried railroad tracks, decking, foundations, or other industrial materials.
- Remnants of homesteading. These could include bricks, nails, household items, toys, food containers, and other items associated with homes or farming sites.

The above list does not cover every possible cultural resource. When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

If any employee, contractor, or subcontractor believes that they have uncovered cultural resources or human remains at any point in the project, take the following steps to ***Stop-Protect-Notify***. **If you suspect that the discovery includes human remains, also follow Sections 5 and 6.**

STEP A: Stop Work.

All work must stop immediately in the vicinity of the discovery.

STEP B: Protect the Discovery.

Leave the discovery and the surrounding area untouched and create a clear, identifiable, and wide boundary (30 feet or larger) with temporary fencing, flagging, stakes, or other clear markings. Provide protection and ensure integrity of the discovery until cleared by the Department of Archaeological and Historical Preservation (DAHP) or a licensed, professional archaeologist.

Do not permit vehicles, equipment, or unauthorized personnel to traverse the discovery site. Do not allow work to resume within the boundary until the requirements of this IDP are met.

STEP C: Notify Project Archaeologist (if applicable).

If the project has an archaeologist, notify that person. If there is a monitoring plan in place, the archaeologist will follow the outlined procedure.

STEP D: Notify Project and Washington Department of Ecology (Ecology) contacts.

Project Lead Contacts

Primary Contact		Alternate Contact	
Name:		Name:	
Phone:		Phone:	
Email:		Email:	

Ecology Contacts (completed by Ecology Project Manager)

Ecology Project Manager		Alternate or Cultural Resource Contact	
Name:		Name:	
Program:		Program:	
Phone:		Phone:	
Email:		Email:	

STEP E: Ecology will notify DAHP.

Once notified, the Ecology Cultural Resource Contact or the Ecology Project Manager will contact DAHP to report and confirm the discovery. To avoid delay, the Project Lead/Organization will contact DAHP if they are not able to reach Ecology.

DAHP will provide the steps to assist with identification. DAHP, Ecology, and Tribal representatives may coordinate a site visit following any necessary safety protocols. DAHP may also inform the Project Lead/Organization and Ecology of additional steps to further protect the site.

Do not continue work until DAHP has issued an approval for work to proceed in the area of, or near, the discovery.

DAHP Contacts:

Name: Rob Whitlam, PhD
Title: State Archaeologist
Cell: 360-890-2615
Email: Rob.Whitlam@dahp.wa.gov
Main Office: 360-586-3065

Human Remains/Bones:

Name: Guy Tasa, PhD
Title: State Anthropologist
Cell: 360-790-1633 (24/7)
Email: Guy.Tasa@dahp.wa.gov

4. TRIBAL CONTACTS

In the event cultural resources are discovered, the following tribes will be contacted. See Section 10 for Additional Resources.

Tribe:		Tribe:	
Name:		Name:	
Title:		Title:	
Phone:		Phone:	
Email:		Email:	
Tribe:		Tribe:	
Name:		Name:	
Title:		Title:	
Phone:		Phone:	
Email:		Email:	

Please provide contact information for additional tribes within your project area, if needed, in Section 11.

5. FURTHER CONTACTS (if applicable)

If the discovery is confirmed by DAHP as a cultural or archaeological resource, or as human remains, and there is a partnering federal or state agency, Ecology or the Project Lead/Organization will ensure the partnering agency is immediately notified.

Federal Agency:		State Agency:	
Agency:		Agency	
Name:		Name:	
Title:		Title:	
Phone:		Phone:	
Email:		Email:	

6. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect. Follow the steps under ***Stop-Protect-Notify.*** For specific instructions on how to handle a human remains discovery, see: *RCW 68.50.645: Skeletal human remains—Duty to notify—Ground disturbing activities—Coroner determination—Definitions*.

Suggestion: If you are unsure whether the discovery is human bone or not, contact Guy Tasa with DAHP, for identification and next steps. Do not pick up the discovery.

Guy Tasa, PhD State Physical Anthropologist
Guy.Tasa@dahp.wa.gov

(360) 790-1633 (Cell/Office)

For discoveries that are confirmed or suspected human remains, follow these steps:

1. Notify law enforcement and the Medical Examiner/Coroner using the contacts below. **Do not call 911** unless it is the only number available to you.

   Enter contact information below (required):
   - Local Medical Examiner or Coroner name and phone:
   - Local Law Enforcement main name and phone:
   - Local Non-Emergency phone number (911 if without a non-emergency number):
2. The Medical Examiner/Coroner (with assistance of law enforcement personnel) will determine if the remains are human or if the discovery site constitutes a crime scene and will notify DAHP.
3. **DO NOT speak with the media, allow photography or disturbance of the remains, or release any information about the discovery on social media.**
4. If the remains are determined to be non-forensic, Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection and to shield them from being photographed by others or disturbed.

Further activities:

- Per RCW 27.44.055, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains. Ecology staff will participate in consultation. Organizations may also participate in consultation.
- Documentation of human skeletal remains and funerary objects will be agreed upon through the consultation process described in RCW 27.44.055, RCW 68.50, and RCW 68.60.
- When consultation and documentation activities are complete, work in the discovery area may resume as described in Section 8.

If the project occurs on federal lands (such as a national forest or park or a military reservation) the provisions of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) apply and the responsible federal agency will follow its provisions. Note that state highways that cross federal lands are on an easement and are not owned by the state.

If the project occurs on non-federal lands, the Project Lead/Organization will comply with applicable state and federal laws, and the above protocol.

7. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological resources discovered during construction are protected by state law RCW 27.56 and assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made.

The Project Lead/Organization must ensure that proper documentation and field assessment are made of all discovered cultural resources in cooperation with all parties: the federal agencies (if any), DAHP, Ecology, affected tribes, and the archaeologist.

The archaeologist will record all prehistoric and historic cultural material discovered during project construction on a standard DAHP archaeological site or isolate inventory form. They will photograph site overviews, features, and artifacts and prepare stratigraphic profiles and soil/sediment descriptions for minimal subsurface exposures. They will document discovery locations on scaled site plans and site location maps.

Cultural features, horizons, and artifacts detected in buried sediments may require the archaeologist to conduct further evaluation using hand-dug test units. They will excavate units in a controlled fashion to expose features, collect samples from undisturbed contexts, or to interpret complex stratigraphy. They may also use a test unit or trench excavation to determine if an intact occupation surface is present. They will only use test units when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. They will conduct excavations using standard archaeological techniques to precisely document the location of cultural deposits, artifacts, and features.

The archaeologist will record spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock for each unit on a standard form. They will complete test excavation unit level forms, which will include plan maps for each excavation level and artifact counts and material types, number, and vertical provenience (depth below

surface and stratum association where applicable) for all recovered artifacts. They will draw a stratigraphic profile for at least one wall of each test excavation unit.

The archaeologist will screen sediments excavated for purposes of cultural resources investigation through 1/8-inch mesh, unless soil conditions warrant 1/4-inch mesh.

The archaeologist will analyze, catalogue, and temporarily curate all prehistoric and historic artifacts collected from the surface and from probes and excavation units. The ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, Ecology, and the affected tribe(s).

Within 90 days of concluding fieldwork, the archaeologist will provide a technical report describing any and all monitoring and resultant archaeological excavations to the Project Lead/Organization, who will forward the report to Ecology, the federal agencies (if any), DAHP, and the affected tribe(s) for review and comment.

If assessment activities expose human remains (burials, isolated teeth, or bones), the archaeologist and Project Lead/Organization will follow the process described in **Section 6**.

8. PROCEEDING WITH WORK

The Project Lead/Organization shall work with the archaeologist, DAHP, and affected tribe(s) to determine the appropriate discovery boundary and where work can continue.

Work may continue at the discovery location only after the process outlined in this plan is followed and the Project Lead/Organization, DAHP, any affected tribe(s), Ecology, and the federal agencies (if any) determine that compliance with state and federal laws is complete.

9. ORGANIZATION RESPONSIBILITY

The Project Lead/Organization is responsible for ensuring:

- This IDP has complete and accurate information.
- This IDP is immediately available to all field staff at the sites and available by request to any party.
- This IDP is implemented to address any discovery at the site.
- That all field staff, contractors, and volunteers are instructed on how to implement this IDP.

10. ADDITIONAL RESOURCES

Informative Video

Ecology recommends that all project staff, contractors, and volunteers view this informative video explaining the value of IDP protocol and what to do in the event of a discovery. The target audience is anyone working on the project who could unexpectedly find cultural resources or human remains while excavating or digging. The video is also posted on DAHP's inadvertent discovery language website.

Ecology's IDP Video (https://www.youtube.com/watch?v=ioX-4cXfbDY)

Informational Resources

DAHP (https://dahp.wa.gov)

Washington State Archeology (DAHP 2003)

(https://dahp.wa.gov/sites/default/files/Field%20Guide%20to%20WA%20Arch_0.pdf)

Association of Washington Archaeologists (https://www.archaeologyinwashington.com)

Potentially Interested Tribes

Interactive Map of Tribes by Area

(https://dahp.wa.gov/archaeology/tribal-consultation-information)

WSDOT Tribal Contact Website

(https://wsdot.wa.gov/tribal/TribalContacts.htm)

11. ADDITIONAL INFORMATION

Please add any additional contact information or other information needed within this IDP.

Implement the IDP if you see…

Chipped stone artifacts.

Examples are:

- Glass-like material.
- Angular material.
- “Unusual” material or shape for the area.
- Regularity of flaking.
- Variability of size.

Stone artifacts from Oregon.

Stone artifacts from Washington.

Biface-knife, scraper, or pre-form found in NE Washington. Thought to be a well knapped object of great antiquity. Courtesy of Methow Salmon Rec. Foundation.

Implement the IDP if you see…

Ground stone artifacts.

Examples are:

- Unusual or unnatural shapes or unusual stone.
- Striations or scratching.
- Etching, perforations, or pecking.
- Regularity in modifications.
- Variability of size, function, or complexity.

Above: Fishing Weight - credit CRITFC Treaty Fishing Rights website.

Artifacts from unknown locations (left and right images).

Implement the IDP if you see…

Bone or shell artifacts, tools, or beads.

Examples are:

- Smooth or carved materials.
- Unusual shape.
- Pointed as if used as a tool.
- Wedge shaped like a “shoehorn”.
- Variability of size.
- Beads from shell (dentalium) or tusk.

Upper Left:*Bone Awls from Oregon.*

Upper Center: *Bone Wedge from California.*

Upper Right: *Plateau dentalium choker and bracelet, from Nez Perce National Historical Park, 19th century, made using Antalis pretiosa shells Credit: Nez Perce - Nez Perce National Historical Park, NEPE 8762, Public Domain.*

Above: *Tooth Pendants. Right: Bone Pendants. Both from Oregon and Washington.*

Implement the IDP if you see…

Culturally modified trees, fiber, or wood artifacts.

Examples are:

- Trees with bark stripped or peeled, carvings, axe cuts, de-limbing, wood removal, and other human modifications.
- Fiber or wood artifacts in a wet environment.
- Variability of size, function, and complexity.

Left and Below: *Culturally modified tree and an old carving on an aspen (Courtesy of DAHP).*

Right, Top to Bottom: *Artifacts from Mud Bay, Olympia: Toy war club, two strand cedar rope, wet basketry.*

Implement the IDP if you see…

Strange, different, or interesting looking dirt, rocks, or shells.

Human activities leave traces in the ground that may or may not have artifacts associated with them. Examples are:

- “Unusual” accumulations of rock (especially fire-cracked rock).
- “Unusual” shaped accumulations of rock (such as a shape similar to a fire ring).
- Charcoal or charcoal-stained soils, burnt-looking soils, or soil that has a “layer cake” appearance.
- Accumulations of shell, bones, or artifacts. Shells may be crushed.
- Look for the “unusual” or out of place (for example, rock piles in areas with otherwise few rocks).

Shell Midden pocket in modern fill discovered in sewer trench.

Underground oven. Courtesy of DAHP.

Shell midden with fire cracked rock.

Hearth excavated near Hamilton, WA.

Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Agricultural or logging equipment. May include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, etc.
- Domestic items including square or wire nails, amethyst colored glass, or painted stoneware.

Left: Top to Bottom: *Willow pattern serving bowl and slip joint pocket knife discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*

Right: *Collections of historic artifacts discovered during excavations in eastern Washington cities.*

Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Railway tokens, coins, and buttons.
- Spectacles, toys, clothing, and personal items.
- Items helping to understand a culture or identity.
- Food containers and dishware.

Right, from Top to Bottom: *Coins, token, spectacles and Montgomery Ward pitchfork toy discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*

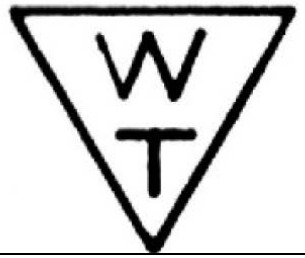
Main Image: *Dishes, bottles, workboot found at the North Shore Japanese bath house (ofuro) site, Courtesy Bob Muckle, Archaeologist, Capilano University, B.C. This is an example of an above ground resource.*

Implement the IDP if you see…

- Old munition casings – if you see ammunition of any type – ***always assume they are live and never touch or move!***
- Tin cans or glass bottles with an older manufacturer's technique – maker's mark, distinct colors such as turquoise, or an older method of opening the container.

Far Left: .303 British cartridge found by a WCC planting crew on Skagit River. Don't ever touch something like this!
Left: Maker's mark on bottom of old bottle.

Right: *Old beer can found in Oregon. ACME was owned by Olympia Brewery. Courtesy of Heather Simmons.*



Logo employed by Whithall Tatum & Co. between 1924 to 1938 (Lockhart et al. 2016).

Can opening dates, courtesy of W.M. Schroeder.

Implement the IDP if you see…

You see historic foundations or buried structures.

Examples are:

- Foundations.
- Railroad and trolley tracks.
- Remnants of structures.

Counter Clockwise, Left to Right: *Historic structure 45KI924, in WSDOT right of way for SR99 tunnel. Remnants of Smith Cove shantytown (45-KI-1200) discovered during Ecology CSO excavation, City of Spokane historic trolley tracks uncovered during stormwater project, intact foundation of historic home that survived the Great Ellensburg Fire of July 4, 1889, uncovered beneath parking lot in Ellensburg.*

Implement the IDP if you see...

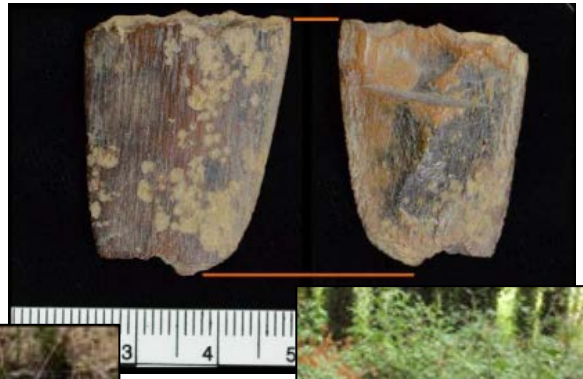
Potential human remains.

Examples are:

- Grave headstones that appear to be older than 50 years.
- Bones or bone tools--intact or in small pieces. It can be difficult to differentiate animal from human so they must be identified by an expert.
- These are all examples of animal bones and are not human.

Center: *Bone wedge tool, courtesy of Smith Cove Shantytown excavation (45KI1200).*

Other images (Top Right, Bottom Left, and Bottom) Center: Courtesy of DAHP.



Directly Above: This is a real discovery at an Ecology sewer project site.

What would you do if you found these items at a site? Who would be the first person you would call?

Hint: *Read the plan!*

PART 1 - GENERAL

1.01 SUMMARY

A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
   1. Preconstruction meeting;
   2. Progress meetings;

1.02 PRECONSTRUCTION MEETING

A. Refer to provision 1-08.0(1), Preconstruction Conference, of the Special Provisions. The conference will be held at the Project Site or another convenient location as selected by Owner.

B. Contractor shall be responsible for notifying his personnel and the subcontractors who are to attend the conference. Conference is also open to all other people who will work on the Project.

C. The Architect will:
   1. Record, produce, and distribute copies of the minutes to the Owner and General Contractor within seven (7) days of the meeting.

D. The General Contractor shall be responsible to distribute copies to all other Contractor attendees.

1.03 PROGRESS MEETINGS

A. For purposes of coordination and scheduling after start of the work, bi-weekly Progress Meetings will be held to enable an orderly review of the construction progress and to provide for systematic discussion and analysis of concerns that may arise relative to execution of the work.

B. The meeting will be held at the Project Site or another convenient location as selected by Owner.

C. Attendance: Representatives attending meetings are required to be qualified and authorized to act on behalf of their firms. Attendance shall include:
   1. Architect and Subonsultant's, as appropriate
   2. Owner's Representatives;
   3. Contractor's Superintendent and Project Manager;
   4. Subcontractors, as appropriate;
   5. Others, as requested.

D. Agenda: Discussion will pertain to items, such as:
   1. Attendees; list of attendees and company they represent;
   2. Review and approve minutes of previous meeting; written corrections, additions and/or deletions to previous minutes acknowledged;
   3. Review construction schedule; confirm current status of work;
   4. Present corrective measures and procedures to regain project schedule, as applicable;
   5. Present field observations, problems, and conflicts.
   6. Discuss problems impeding progress schedule;
   7. Review outstanding RFIs;
   8. Review proposed changes for:
      a. Effect on construction schedule and on completion date.
      b. Effect on any other contracts of the project,
   9. Review Change Order Proposal log and finalize prices;
   10. Review draft of Application for Payment (at end of month);
   11. Review any other business.

12. Confirm next meeting date, location and time plus those requested to be in attendance.

E. Architect will:
1. Administer bi-weekly Progress Meetings throughout work progress;
2. Record and distribute the following by e-mail within 3 working days after the meeting. Minutes, RFI, ASI, Submittal/Shop Drawing and Cost Change logs. Distribution to include all attendees other than those related to the General Contractor's contract. The General Contractor is responsible to distribute copies to all Contractor attendees.
3. Provide paper copies of the minutes, RFI, ASI, Submittal/Shop Drawing and Cost Change logs to attendees at the next meeting.
4. Ascertain that work is prosecuted consistently with contract documents and construction schedules.

F. Contractor shall be responsible to provide the following at each meeting:
1. Current (and updated if necessary) construction schedule which includes the past week and 2 week 'look ahead'.
2. One set of record documents (drawings, specifications, COs, COPs, RFIs, FAs, etc.).

1.04 ADDITIONAL MEETINGS

A. As the construction progresses, additional meetings may be required. These may be called at the direction of or by the Architect or Owner.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
   1. General requirements for sustainable design reporting.

B. The individual submittal requirements of certain submittals are specified in applicable sections for each unit of work.

1.02 REPORTING REQUIREMENTS

A. Contractor must familiarize himself with the relevant reporting requirements and provide the necessary information and instruction to all subcontractors and installers.

1.03 REFERENCE STANDARDS

A. USGBC LEED v4-BD+C - LEED v4 for Building Design and Construction 2018.

1.04 LEED SUBMITTALS

A. Sustainable Design Documentation: The scope of required documentation is specified in this section and in applicable individual specification sections.

B. LEED v4 Prerequisites and Credits - Documentation is required for the following items:
   1. Waste Disposal Management: Periodic reports quantifying diversion of construction waste away from landfills and incineration facilities.
      a. Include information on percentage of diverted material and number of material streams.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PROCEDURES

A. Submit sustainable design documentation to Architect, unless otherwise indicated.

B. Submit extra copy of sustainable design documentation to Architect for transmittal to Sustainable Design Consultant, unless otherwise indicated.

C. Where an item of sustainable design documentation is specified, fill out and submit electronically the appropriate form(s), and/or use appropriate software.
   1. Fill out one line for each different brand name product and each different manufacturer of a lot of commodity products.
   2. Where required attachments are specified, attach the documentation.
   3. Mark each blank with the appropriate information; use "ATT" for items attached; if any item is not relevant use the code "NR"; if any item is not available use the code "NA".

D. Each form must be signed by the entity capable of certifying the information.
   1. Certification signatures must be made by an officer of the company.
   2. For products, certification must be made by the manufacturer not the supplier.
   3. For custom fabricated products, certification by the fabricator is acceptable.

E. Submit the completed forms in accordance with the requirements of this Section, as information submittals.
   1. Give each form a unique submittal number.

2. Do not combine sustainable design documentation with product data or shop drawing submittals.

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Summary of sustainable building requirements for project as necessary for certification of this project through the US Green Building Council's (USGBC) Leadership in Energy and Environmental Design version 4 for Building Design and Construction: New Construction Rating System (LEED NC v4).

B. Related performance and administrative requirements.

1.02 RELATED SECTIONS:

A. Section 01 31 19 – Project Meetings.

B. Section 01 33 00 – Submittal Procedures.

C. Section 01 74 19 – Construction And Demolition Waste Management.

D. Sustainable criteria as noted in Division 2 through 48, including but not limited to other Sections listed in Section 01 35 63.

1.03 REFERENCES

A. LEED Building Design & Construction, New Construction version 4 (LEED NC v4) Rating System. Available as a free download from USGBC's website www.usgbc.org.

B. LEED v4 Reference Guide for Building Design and Construction (LEED v4 BD+C Reference Guide). An essential supplement to the LEED NC v4 Rating System:

1. A full discussion of credit and documentation requirements, green building issues, design approaches, calculation methodologies, references, definitions, case studies.
2. Available for a fee from USGBC web site.

C. LEED BD+C version 4.1 Rating System, Reference Guide, and other resources specific to the v4.1 pilot are available for free from the USGBC web site at https://new.usgbc.org/leed-v41.

D. LEED Credit Forms: LEED On-Line with calculators and templates is available to team members at LEED-Online, https://www.usgbc.org/leedonline/.

E. Sustainable Agriculture Network Standard: Certification program for sustainable agriculture practices and products, sanstandards.org.

1.04 DEFINITIONS

A. LEED (Leadership in Energy and Environmental Design): Green building rating system developed by the US Green Building Council. The system certifies four levels (Certified, Silver, Gold and Platinum) of environmental achievement based on a point and credit scoring system

B. Definitions of other terms related to individual LEED credits: Refer to LEED v4 BD+C Reference Guide.

1.05 SUSTAINABLE BUILDING REQUIREMENTS

A. Integrate sustainable building materials and methods into Work as required to meet or exceed LEED NC v4 Silver Level certification from US Green Building Council.

1. Satisfy prerequisites and credits applicable to Work of this Contract
2. Submit documentation that demonstrates this performance.
3. Participate as necessary to complete LEED certification application.
4. Conform to documentation requirements for LEED certification.
5. Adhere to the LEED Minimum Program Requirements (MPRs), including MPR #1 – Must Comply with Environmental Laws:

a. The LEED project building or space, all other real property within the LEED project boundary, and all project work must comply with applicable federal, state, and local building-related environmental laws and regulations in place where the project is located.

B. Refer to Contract Documents for incorporated sustainable/environmental requirements provisions.

1.06 CONTRACTOR REQUIREMENTS

A. Coordinate and assist with documentation for LEED certification.

B. Designate a LEED Representative, responsible for:

1. Implementation, coordination, and documentation of specified LEED requirements.
2. Attend LEED related meetings during construction.
3. Be present on-site during times that LEED related work is in progress.

C. Submit LEED information and Final Submittal in electronic format for inclusion in certification application to Sustainability Consultant.

1. Maintain local copies of back-up documentation if further information is requested from Sustainability Consultant.

D. Maintain copy of LEED v4 BD+C Reference Guide at project site construction office.

E. LEED Training Program: The Contractor shall establish, manage, and implement a written Project specific LEED-procedures training program, and provide all necessary and appropriate instruction for its employees, and its Subcontractors of any tier, prior to their performance of Work at the Project Site in order to ensure the LEED requirements of the Project are met.

1. Coordinate and attend LEED Construction Kickoff Meeting to review LEED credits included in the project, methods, products and materials, tracking, and submittals for the project.
2. Arrange and conduct LEED Certification review meetings at least once a month
   a. Submit schedule of LEED Review Meetings to Architect for review within fourteen calendar days of Notice to Proceed.
   b. For convenience, Contractor may combine with project meetings as specified Section 01 31 19, or at other times coordinated with Architect

1.07 SUBMITTAL PREREQUISITES

A. Conform to following as required for LEED documentation of Contractor-responsible LEED credits.

B. Within fourteen days after receipt of Notice of Award and prior to waste removal by Contractor from Project, develop and submit to Owner for review of:

1. Construction & Demolition Waste Management Plan: Refer to Section 01 74 19.

C. Progress Report Submittals:

1. Confirm compliance for LEED credits at least every two months, as specified under Submittals, by submitting a progress report that includes updated submittals.
2. Submit new Progress Report with each Application for Payment.
3. Include data indicating actual cost for materials purchased to date and include estimates for final material lists and costs.

D. Final Submittals: Submit final submittals within 60 days of Substantial Completion. For listed products, include complete product and supplier contact information.

1. Include relevant LEED Submittal Coversheet (Figure 2 below) with all submittals.

1.08 SUBMITTALS

A. Submit following in conformance to Section 01 33 00 – Submittal Procedures.

B. SS Prerequisite: Construction Activity Pollution Prevention.

1. Date-stamped photos of in-place erosion and sediment control measures taken, including any corrective action. Photos should be taken at regular intervals and show all areas of the site covered in the ESC Plan.
2. A summary, sample log, checklist, inspection report, or similar document that demonstrate periodic inspection of the implemented measures. This documentation must include:
   a. Sample dates
   b. Inspection frequency (at least monthly, year-round)
   c. At least 3 inspections equally spaced over the site work period
   d. Descriptions of any corrective action taken.

C. MR Prerequisite Construction & Demolition Waste Management (CDWM) Planning and MR Credit Construction & Demolition Waste Management (CDWM) Plan that complies with Section 01 74 19.
1. Final report detailing all major waste streams generated, including disposal and diversion rates, diversion methods and facilities per Section 01 74 19.
2. Completed tracking document that includes a tabulation of total waste materials and quantity diverted, using consistent unit of measurement.
3. Supporting documentation:
   a. Documentation of recovery rate (if commingled).
   b. Waste hauling certificates or receipts for source separate waste streams.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 LEED COMPLIANCE - GENERAL

A. Meet LEED Prerequisites and support Credits as identified in the LEED Checklist in Figure 1 at the end of this Section, as required for achieving LEED Certification and as applicable to the scope of work.

B. Prior to beginning Work of this Contract, verify construction conditions as acceptable to achieve LEED Credit and Prerequisite requirements.

C. Correct non-conforming work failing to meet LEED requirements at Contractor's expense.

3.02 COORDINATION

A. Coordinate with all subcontractors per Section 01 74 19.
1. Coordination shall include review of this Section 01 35 63 and related sections.
2. Include subcontractors in related meetings, including LEED meetings, per Section 01 31 19.

3.03 EROSION & SEDIMENTATION CONTROL

A. SS Prerequisite Construction Activity Pollution Prevention: Conform to intent of this Prerequisite, Civil Drawings, and provisions of Division 31, including Section 31 25 00.

3.04 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

A. MR Prerequisite Construction and Demolition Waste Management Planning and MR Credit Construction and Demolition Waste Management: Meet objectives and diversion rates established in the Construction and Demolition Waste Management Plan; see Section 01 74 19.

END OF SECTION

O'Brien360

LEEDv4 New Construction Scorecard

campus \ group
design \ construction

Project: Lacey Museum and Civic Center
Date: 6/17/2020

Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80 points and above

Y	L	U	N				
49	13	17	31	**Total Project Score**		**Possible Points**	110

Y	L	U	N					
1				**Integrative Process**		*Possible Points:*	1	
1				d	c1	Integrative Process (v4.1)		1

Y	L	U	N					
6		1		**Location and Transportation**		*Possible Points:*	16	
			16	d	c1	LEED ND Location		16
1				d	c2	Sensitive Land Protection		1
1		1		d	c3	High Priority Site		2
2			3	d	c4	Surrounding Density & Diverse U	8+ uses	5
			5	d	c5	Access to Quality Transit (v4.1)	72/30 trips	5
1				d	c6	Bicycle Facilities (v4.1)	ST=2.5% + LT=5% (1 per 10	1
			1	d	c7	Reduced Parking Footprint (v4.1	1 space per 100 occ.	1
1				d	c8	Electric Vehicles (v4.1)	2% of spaces (min. 2)	1

Y	L	U	N					
4	1	4	1	**Sustainable Sites**		*Possible Points:*	10	
Y				c	p1	Const. Activity Pollution Preven		required
1				d	c1	Site Assessment		1
		1	1	d	c2	Protect or Restore Habitat (v4.1)	Restore 25%	2
1				d	c3	Open Space (v4.1)	30% of total area (25% veg)	1
		3		d	c4	Rainwater Management (v4.1)	90th %	3
2				d	c5	Heat Island Reduction		2
	1			d	c6	Light Pollution Reduction		1

Y	L	U	N					
4	1		6	**Water Efficiency**		*Possible Points:*	11	
Y				d	p1	Outdoor Water Use Reduction	30% Reduction	required
Y				d	p2	Indoor Water Use Reduction	20% Reduction	required
Y				d	p3	Building-Level Water Metering		required
	1		1	d	c1	Outdoor Water Use Reduction	50% reduction	2
3			3	d	c2	Indoor Water Use Reduction	35% reduction	6
			2	d	c3	Cooling Tower Water Use		2
1				d	c4	Water Metering		1

Y	L	U	N					
15	5	5	8	**Energy & Atmosphere**		*Possible Points:*	33	
Y				c	p1	Fundamental Cx & Verification		required
Y				d	p2	Minimum Energy Performance	5% reduction	required
Y				d	p3	Building-Level Energy Metering		required
Y				d	p4	Fundamental Refrigerant Mgmt		required
3		1	2	c	c1	Enhanced Commissioning		6
12	2		4	d	c2	Optimize Energy Performance	35% reduction	18
		1		d	c3	Advanced Energy Metering		1
		1	1	c	c4	Demand Response		2
	3	2		d	c5	Renewable Energy (v4.1)	5% tot. energy use	5
			1	d	c6	Enhanced Refrigerant Mgmt		1
				c	c7	--		

Y	L	U	N					
4	1	1	7	**Materials & Resources**		*Possible Points:*	13	
Y				d	p1	Storage/Collection of Recyclable		required
Y				c	p2	C&D Waste Mgmt Planning		required
	1		4	d	c1	Bldg Life-Cycle Impact Reductio		5
1			1	c	c2	Environmental Product Declarati		2
		1	1	c	c3	Sourcing of Raw Materials (v4.1)		2
1			1	c	c4	Material Ingredients (v4.1)		2
2				c	c5	C&D Waste Mgmt (v4.1)		2

Y	L	U	N					
12		4		**Indoor Environmental Quality**		*Possible Points:*	16	
Y				d	p1	Minimum IAQ Performance		required
Y				d	p2	Env. Tobacco Smoke Control (v4		required
2				d	c1	Enhanced IAQ Strategies		2
3				c	c2	Low-Emitting Materials (v4.1)	4 Categories	3
1				c	c3	Construction IAQ Mgmt Plan		1
1		1		c	c4	IAQ Assessment		2
1				d	c5	Thermal Comfort	50% ind. + 100% multi-occ.	1
2				d	c6	Interior Lighting		2
1		2		d	c7	Daylight (v4.1)		3
1				d	c8	Quality Views	Min. 75% occ. spaces	1
		1		d	c9	Acoustic Performance (v4.1)		1

Y	L	U	N					
2	4			**Innovation in Design**		*Possible Points:*	6	
	1			d	c1	ID: Green Building Education		1
	1			d	c2	ID: LEED O&M Starter Kit		1
	1			d	c3	ID: TBD Pilot Credit		1
1				d	c4	ID: Purchasing Lamps		1
	1			d	c5	ID: TBD Exem Perf		1
1				c	c6	LEED™ Accredited Professional		1

Y	L	U	N					
1	1	2		**Regional Priority Credits**		*Possible Points:*	4	
1				c	RPC 1	Environmental Product Declarations		1
			1	d	RPC 2	Indoor Water Use Reduction		1
		1		d	RPC 3	Demand Response		1
	1			d	RPC 4	Renewable Energy (v4.1)		1
		1		d	RPC 5	Rainwater Management (v4.1)		1
		1		c	RPC 6	Sourcing of Raw Materials (v4.1)		1

Figure 1: LEED Checklist

PART 1 - GENERAL

1.01 DESCRIPTION

A. Description, General: Unless otherwise noted, the temporary facilities and utilities described herein shall be provided by the Contractor. Work and requirements include, but are not necessarily limited to, the following:

1. Provide temporary devices, equipment, power and convenience utilities for use, convenience and safety of personnel engaged in the work of the Contract. Installations of temporary utilities to be safe, non-hazardous, and sanitary; they are to be protective of persons and property, and be free of deleterious effects.
2. Locate temporary facilities and utilities where required or as directed or approved by Owner and Architect; move to other locations on site should other circumstances develop during construction requiring such action.
3. Make all service connections to existing services in approved manner, and in accordance with code requirements.
4. Install extensions and branchings, as required.
5. Maintain and protect temporary utilities.
6. Remove from site upon completion of the Project or when directed.

B. Requirements of Regulatory Agencies (current as of Project Manual date):

1. Rules and recommendations of utility companies; maintain required egress.
2. Applicable local industry standards for construction work (published recommendations by local "Building Council").

PART 2 - PRODUCTS

2.01 TEMPORARY UTILITIES

A. Temporary Services - General

1. Required services include, but are not necessarily limited to, water, toilet facilities, and telephone.
2. Where possible and reasonable, connect to existing franchised utilities for required services-
3. Comply with service companies recommendations for materials and methods, or engage service companies to install services. Locate and relocate services (as necessary) to minimize interference with construction operations.
4. Materials may be new or used, but shall be of adequate capacity for required usage. Materials shall not create unsafe conditions, or violate applicable codes and standards.

B. Temporary Telephone Service: Provide cellular telephone at construction site for use by personnel and employees engaged on work.

C. Temporary Electrical Power & Lighting: Not required.

D. Temporary Heat & Ventilation: Not required.

E. Water For Construction Purposes

1. Provide as required for construction purposes.
2. Make all required temporary connections to closest utility piping and provide branch piping, taps, hoses, nozzles and other accessories required; provide taps located as required so that water is available throughout the construction by the use of hoses.
3. Pay installation costs, maintenance, and removal of temporary devices.
4. At completion, or before if directed, disconnect temporary connections and piping and remove from site.

F. Temporary Sanitary Facilities
   1. General: Provide temporary sanitary facilities for personnel employed on the project, in compliance with laws and regulations. Service, clean, and maintain facilities and enclosures. Pay all costs for installation, maintenance and removal of temporary sanitary facilities.
   2. Toilets: Provide chemical type toilets for the use of all those connected with the work; install when work is commenced; locate toilets in laydown area adjacent to field office outside of security wall and in laydown area inside of security wall where directed by Architect; pump out, clean and disinfect, and install fresh chemical when needed.
   3. Drinking Water: Provide from portable containers, for all those connected with the work. Pipe and transport in such manner as to keep it clean and fresh; serve in single containers.

2.02 MISCELLANEOUS TEMPORARY FACILITIES

A. Field Office: Provide at Contractor's option.

PART 3 - EXECUTION

3.01 TEMPORARY UTILITIES

A. General
   1. Maintain and operate systems to assure continuous service.
   2. Modify and extend systems as work progress requires.
   3. Verify termination/removals with Owner.

B. Removal: Completely remove temporary materials and equipment when no longer required. Clean and repair damage caused by temporary installations and use of temporary facilities. Restore existing and permanent facilities used for temporary services to specified, or original, condition.

3.02 WASTE REMOVAL

A. See Section 01 74 19-Construction and Demolition Waste Management, for additional requirements.

B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition

C. Provide containers with lids. Remove trash from site periodically.

D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Description, General: Work and requirements include, but are not necessarily limited to, the following:

1. Barriers, Covers and Enclosures including: Furnish, install and maintain suitable fencing and other protective and sheltering devices as required to:
   a. Prevent injury to persons;
   b. Protect the work from abatement operations; and
   c. Prevent public entry.
2. Remove barriers and enclosures from project site when no longer needed, or at completion of the Project.

B. Requirements Of Regulatory Agencies: Comply with Federal, State, County and all local codes and regulations.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Materials, General: Materials may be new or used, suitable for intended purposes, reasonably clean, and uniform in appearance. Materials shall not violate requirements of applicable codes, ordinances and standards.

B. Fencing

1. No. 11 gauge, galvanized chain link fabric, 2-inch mesh.
2. Galvanized steel posts; 1-1/2 inch posts and 2-inch corner posts.

C. Barriers & Other Protective Devices: Materials to Contractor's option, as appropriate to serve required purpose, or as otherwise indicated on Drawings.

PART 3 - EXECUTION

3.01 PERFORMANCE

A. General

1. Install facilities neat and reasonable uniform; structurally adequate for required purposes.
2. Maintain barriers as long as required.
3. Relocate barriers as required by progress of construction.

B. Barriers & Other Protective Devices: Provide temporary barriers and other protective devices at the site during the course of the work to guard against injury and damage to workmen, third persons, and property of others due to work for this project; remove temporary barricades on completion of the work and haul away from the site.

3.02 REMOVAL

A. Completely remove temporary materials, equipment and services when construction needs can be met by use of permanent construction, or at Project completion.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section includes administrative and procedural requirements for cleaning and protection during construction and final cleaning at Substantial Completion.

1.02 RELATED REQUIREMENTS

A. Section 01 74 19 - Construction And Demolition Waste Management.

B. Section 02 41 16 - Structure Demolition.

C. Section 31 11 00 - Clearing And Grubbing.

1.03 QUALITY ASSURANCE

A. General Cleaning Requirements: Conduct cleaning and waste disposal operations in compliance with governing laws, codes, and ordinances. Comply fully with Federal and Local environmental and anti-pollution regulations.

1. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
2. Burning or burying of debris, rubbish, or other waste material on premises is not permitted.

B. Conform to State safety regulations (WISHA requirements).

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.01 CLEANING & PROTECTION DURING CONSTRUCTION

A. General:

1. Contractor shall at all times keep the premises free from accumulation of waste materials, debris and rubbish caused by their operations. Remove all such waste, debris and rubbish daily from Institution grounds and dispose of at legal disposal areas away from the site, at Contractor's expense.
2. Provide on-site containers for collection of waste materials, debris, and rubbish.
3. Allow no debris, broken or open cartons, or other refuse to collect in the project or around it; allow no inflammable or hazardous materials to be stored on the site without approved fire protection precautions and procedures.

3.02 FINAL CLEANING

A. Provide final cleaning operations when indicated. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected in a normal commercial building cleaning and maintenance program, complying with manufacturer's instructions.

B. Complete the following cleaning operations before requesting review for certification of Substantial Completion for the entire Project or a portion of the Project. Cleaning shall include adjacent existing surfaces, such as, but not limited to, walls, floors, ceilings and glazing, that have been affected by the construction activity.

1. Clean the Project Site, yard and grounds, in areas disturbed or impacted by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.
2. Sweep adjacent paved areas broom clean, and wash.
3. Remove tools, construction equipment, machinery, and surplus material from the site.

C. Removal of Protection: Remove temporary protection and facilities installed for protection and administration of the work during construction. Restore landscaping and other repair as necessary or required.

D. Compliances: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner. Do not use Owner's containers for trash generated by cleaning or construction.

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Description of a Job-Site Construction and Demolition Waste Management (CDWM) Plan.

B. Job-Site Waste Reduction Requirements.

1.02 RELATED REQUIREMENTS

A. Section 01 35 63- Sustainable Certification Project Requirements.

B. Section 02 41 16 – Structure Demolition.

C. Section 31 11 00 – Clearing And Grubbing.

1.03 JOB SITE WASTE REDUCTION REQUIREMENTS

A. Divert through salvage, reuse and/or recycle a minimum of 75% of the total construction and demolition material; diverted materials must include at least three material streams. All commingled recycling is required to be one of the streams and must be sent to an offsite sorting facility certified by the Recycling Certification Institute or approved equivalent.

B. Do not generate more than 7.5 pounds of new construction waste per square foot (36.6 kilograms per square meter) of the building's floor area, and salvage or recycle at least 75% of all Renovation and Demolition Waste, not including ADC.

C. To achieve these goals the Contractor shall develop for review a Construction and Demolition Waste Management (CDWM) Plan for this Project in accordance with CDWM Plan requirements under Submittal 1.4.B of this Section

D. Sub-contractors must report all waste and how much was diverted that they take off site that is not controlled through the on-site collection system being monitored by the Contractor's CDWM Plan.

E. Contractor should focus on generating less waste, rather than just diverting waste from the landfill/disposal.

1.04 REFERENCES

A. LEED for New Construction v4.1 (LEED-NCv4.1), MR Credit, Construction and Demolition Waste Management.

B. Waste to Energy: European Commission Waste Framework Directive 2008/98/EC
   1. europa.eu/environment/waste/framework/index.htm
   2. eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:en:PDF

C. Waste to Energy: European Commission Waste Incineration Directive 2000/76/EC:
   1. europa.eu/legislation_summaries/environment/waste_management/l28072_en.htm
   2. central2013.eu/fileadmin/user_upload/Downloads/Document_Centre/OP_Resources/Incineration_Directive_2000_76.pdf

D. Waste to Energy: European Waste to Heat Standards by Fuel Type:
   1. EN 303-1—1999/A1—2003, Heating boilers with forced draught burners, Terminology, general requirements, testing and marking: cen.eu/cen/Products/Search/Pages/default.aspx
   2. EN 303-2—1998/A1—2003, Heating boilers with forced draught burners, Special requirements for boilers with atomizing oil burners: cen.eu/cen/Products/Search/Pages/default.aspx
   3. EN 303-3—1998/AC—2006, Gas-fired central heating boilers, Assembly comprising a boiler body and a forced draught burner: cen.eu/cen/Products/Search/Pages/default.aspx

4. N 303-4—1999, Heating boilers with forced draught burners, Special requirements for boilers with forced draught oil burners with outputs up to 70 kW and a maximum operating pressure of 3 bar, Terminology, special requirements, testing and marking: cen.eu/cen/Products/Search/Pages/default.aspx
5. EN 303-5—2012, Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW: cen.eu/cen/Products/Search/Pages/default.aspx
6. EN 303-6—2000, Heating boilers with forced draught burners, Specific requirements for the domestic hot water operation of combination boilers with atomizing oil burners of nominal heat input not exceeding 70 kW: cen.eu/cen/Products/Search/Pages/default.aspx
7. EN 303-7—2006, Gas-fired central heating boilers equipped with a forced draught burner of nominal heat output not exceeding 1000 kW: cen.eu/cen/Products/Search/Pages/default.aspx

E. Recycling Certification Institute: Includes a list of registered and certified recyclers: www.recyclingcertification.org

1.05 DEFINITIONS

A. Alternative daily cover (ADC): Material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. For LEED, ADC is considered waste and not diverted material.

B. Certified Commingled Recycling Facility: A Recycling Facility (see below) that accepts commingled waste and is certified by the Recycling Certification Institute or approved equivalent.

C. Commingled Waste: Building waste streams that are combined on the project site and hauled away for sorting into recyclable streams. Also known as single-stream recycling.

D. Construction & Demolition Waste (C&D): All non-hazardous solid wastes resulting from construction and demolition activities. C&D waste includes, but is not limited to, building materials, demolition rubble, landscaping materials, soils, packaging materials, debris, and trash.

E. Certified Commingled Recycling (CORR)- Facility: Recycling facility certified by the Recycling Certification Institute or approved equivalent.

F. Hazardous Waste: Any material or byproduct of construction that is regulated by Environmental Protection Agency and that may not be disposed in landfill or other waste end-source without adherence to applicable laws. Includes lead and asbestos.

G. Land-clearing debris: Excavated soils and related vegetation; these are not considered construction, demolition, or renovation waste that can contribute to waste diversion.

H. Landfill: Public or private business involved in the practice of trash disposal.

I. Material Recovery Facility (MRF): A general term used to describe a waste-sorting facility. Mechanical, hand-separation, or a combination of both procedures are used to recover recyclable materials from other waste, which is then disposed of as trash.

J. Material Stream: Materials coming from a job site into markets for building materials; a stream is either a specific material category that is diverted in a specific way; or a mixture of several material categories that are diverted in a specific way, such as deconstructed materials sent to reuse markets or commingled waste sent to a mixed-waste recycling facility.

K. Proper Disposal: As defined by the jurisdiction receiving the waste.

L. Recycling: The process of sorting, cleaning, treating, and reconstituting materials for the purpose of using the material in the manufacture of a new product. Can be conducted on site (as in the grinding of concrete and subsequent reuse on site).

M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product. Recycling facilities have their

own specifications for accepting materials. Depending on the type of facility, it may accept source-separated waste or co-mingled waste or both.

N. Recycling Services. Types of services include:
   1. Source-Separated: Construction waste is sorted on the job-site in separate containers as it is generated. The recycling hauler takes the materials directly to a recycler or a transfer site.
   2. Co-mingled: This service allows contractors to put select recyclables such as wood, cardboard, and metals in one container. The recycling hauler takes the materials to a sorting facility where the materials are separated for recycling.

O. Reuse: Making use of a material without altering its form.

P. Salvage: Recovery of materials for on-site reuse or donation to a third party.

Q. Trash (or Garbage): That part of the waste that cannot be returned, reused, recycled, or salvaged.

R. Waste: For the purpose of this section, the term applies to all excess building materials. Waste includes materials that can be salvaged, returned, recycled, or reused. Excludes hazardous waste.

S. Waste-to-Energy: The conversion of non-recyclable materials into usable heat, electricity or fuel through a variety of processes, including combustion, gasification, pyrolization, anaerobic digestion, and landfill gas (LPG) recovery.

1.06 SUBMITTALS

A. Make submittals in accordance with Section 01 33 00 – Submittal Procedures.

B. Within fourteen (14) days after receipt of Notice of Award and prior to any waste removal by the Contractor from the Project, the Contractor shall develop and submit to the Owner for review a draft CWMD Plan.
   1. The CWMD Plan shall:
      a. Identify at least five materials (both structural and nonstructural) targeted for diversion. Calculations must be based on dry weight.
      b. Specify whether construction waste materials will be separated or co-mingled;
      c. Describe the diversion strategies planned for the project. Strategies shall include one or more of the following options: contracting with a demolition specialist to salvage all or most of materials generated, selective salvage as part of demolition contractor's work, or reuse of materials on-site or in new construction.
      d. Identify where the materials will be taken and how the recycling facility will process the material, including expected diversion rates for each material stream.
      e. Projects where reuse or recycling services are not readily available and that cannot meet diversion thresholds through reuse or recycling alone may claim diversion through waste-to-energy systems, provided they meet applicable standards and requirements (References, Waste-to-Energy). Wood-derived fuel may contribute toward diversion.
   2. At a minimum, the CDWM Plan shall be designed to divert the following waste categories from the landfill, as applicable:
      a. Acoustical ceiling tiles
      b. Asphaltic concrete paving
      c. Cardboard (from supplies and packaging)
      d. Carpet and carpet pad
      e. Concrete and concrete masonry units (CMU's)
      f. Excavated soils
      g. Fluorescent tubes and ballasts (if not recycled designate as hazardous waste)
      h. Gypsum drywall (clean, unpainted)
      i. Metals

j. Paint
k. Plastic film (sheeting, shrink wrap, packaging)
l. Window glass
m. Wood (clean, unpainted, untreated wood scrap including pallets and engineered wood)
n. Job-shack wastes, including office paper, blueprints, pop cans and bottles, and office cardboard.

C. Final CWMD Plan. Within 14 days after Owner has determined that the recycling options addressed in the draft CWMD Plan are acceptable and prior to waste removal, submit the final CWMD Plan.

D. CDWM Reports
1. The Contractor shall be responsible for CDWM reporting whether directly involved in recycling the materials or not (whether the Contractor performs recycling tasks or hires or requires others to do so, such as subcontractors to haul their own drywall or metal).
2. For co-mingled materials, the Contractor shall include the co-mingled C&D recycling rate of the receiving facility. Documentation can either be project-specific diversion rate(s) provided by the sorting facility, or if the method of recording and calculating is regulated by the local or state governing authority, the average annual recycled rate for the sorting facility.
3. Progress Reports. Submit with each Application for Payment a summary of construction waste generated. Include the following:
a. For each material recycled, reused, or salvaged from the Project, the amount (in tons), the receiving party, and the net total cost or savings of salvage or recycling the material. Attached manifests, weight tickets receipts or invoices. For co-mingled materials, the Contractor shall include the co-mingled C&D recycling rate of the receiving facility.
b. The amount (in tons) of material disposed of as garbage from the Project, the location of the Receiving Facility, and the total disposal cost. Include manifests, weight tickets, receipt, and invoices.
4. Final Report: The Contractor shall submit within (14) calendar days of completing the project a final waste management report detailing all major waste streams generated at the Project, including disposal and diversion rates. The final report shall be submitted on a form acceptable to the Owner's Project Manager and shall contain the following information:
a. The number of material streams diverted.
b. Percentage of construction and demolition waste diverted from the landfill.
c. Confirmation that ADC is excluded from diverted waste calculations but is included in total construction and demolition waste calculations.
d. For each material recycled, reused, or salvaged from the Project, the total amount (in tons), the receiving party, and the net total cost or savings of salvage or recycling the material. Attached manifests, weight tickets receipts or invoices.
e. If waste-to-energy systems were used, provide a brief description of how recycling and reuse were used as diversion strategies prior to using waste-to-energy.
1) Provide documentation that the facility follows the European Commission Framework Directive 2008/98/#D and the Waste Incineration Directive 2000/76/EC and meets the applicable European Committee for Standardization (CEN) EN 303 standards.
f. The total amount (in tons) of material disposed of as garbage from the Project, the location of the Receiving Facility, and the total disposal cost. Include manifests, weight tickets, receipt, and invoices.
g. Documentation of diversion rate of commingled waste. Can be project-specific rate provided by sorting facility, or if the method of recording and calculating is regulated by the local or state governing authority, the average annual recycling rate for the sorting facility.

h. Verification of recycling facility certification from the Recycling Certification Institute (or approved equivalent) if the facility is certified.
i. Construction and Demolition Waste Calculator (available from the resources tab of the LEED Credit Library) or equivalent documentation.
j. Total new construction waste in pounds or kilograms.
k. Waste per project gross floor area in square feet or square meters.
l. Total percentage of renovation and demolition waste diverted from the landfill.
m. Confirmation that ADC is excluded from diverted waste calculations but is included in total construction and demolition waste calculations.

1.07 REVENUES

A. Revenues or other savings obtained from recycled, reused, or salvaged materials shall accrue to Contractor unless otherwise noted in the Contract Documents.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 IMPLEMENTATION

A. Implement the CDWM Plan upon start of construction and demolition activities that will generate waste.

B. Establish on-site infrastructure, practices, and policies for on-site collection, sorting, and tracking system, as applicable.

C. Track all hauling receipts including reporting of waste taken off site by subcontractors.

3.02 COMMUNICATION

A. Designate an on-site party (or parties) responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the Project.

B. Distribute copies of the CDWM Plan to each entity performing work at the site.

C. Use safety meetings, signage, and subcontractor agreements to communicate the goals of the waste reduction plan, including instruction about appropriate separation, handling separation, handling, and recycling, salvage, reuse and return methods to be used by all parties at the appropriate stages of the Project.

D. Sub-contractors must report all waste and how much was diverted that they take off site that is not controlled through the on-site collection system being monitored by your CDWM plan.

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDED

A. Section specifies complete demolition of existing warehouse building and adjacent office structure at the City owned site as indicated on respective demolition Drawings, including capping of existing building utilities. Demolish all building elements including walls, floors, roofs, building support services, foundations, slabs-on-grade, and foundation piers, all as required to deconstruct the entire building.

1.02 RELATED REQUIREMENTS SPECIFIED ELSEWHERE:

A. Section 01 35 63 – Sustainability Certification Project Requirements.

B. Section 01 74 19 - Construction And Demolition Waste Management.

C. Section 31 11 00 - Clearing And Grading.

D. Section 31 25 00 - Erosion And Sedimentation Controls.

1.03 PERFORMANCE REQUIREMENTS

A. Conduct all operations in such a manner as to prevent damage to existing adjacent structures and surfaces to remain. Keep free of damage those portions of existing site appurtenances which are to remain. Repair any damage incurred because of the work of this Section to satisfaction of Owner. See applicable Sections of Division 01, “General Requirements,” for further protection requirements.

B. Landscape Plantings to Remain: Save and protect from damage due to work of this Contract all trees and landscape shrubs to remain.

1.04 SUBMITTALS

A. Diagrams, calculations, narrative description, and drawings indicating methods proposed for protecting, bracing and supporting existing structures and improvements which are to remain. Include measures for protecting existing adjacent improvements that may be effected by removal operations.

B. Plan for containment of dust and debris; including preventing dust from contaminating adjacent areas.

1.05 QUALITY ASSURANCE

A. Record actual locations of existing utilities and subsurface obstructions.

B. Notify affected utility companies before starting work and comply with their requirements.

C. Demolition Firm: Experienced firm that specializes in demolition work similar to extent indicated for this project.

D. Provide at least one person who shall be present and in charge of the Demolition Work at all times and who shall be thoroughly familiar with all phases of all work performed under this section.

1.06 JOB CONDITIONS

A. Protection

1. General: Conduct all operations in such a manner as to prevent damage to existing adjacent structures and surfaces to remain. Keep free of damage those portions of existing site appurtenances which are to remain. Repair any damage incurred because of the work of this Section to satisfaction of Owner. See applicable Sections of Division 01, “General Requirements,” for further protection requirements.
2. Reference Bench Marks and Monuments:
   a. Maintain bench marks, monuments, and all other reference points.

b. If disturbed or destroyed, replace as directed.

3. Utilities: The Contractor shall be responsible for and shall immediately repair all damage to existing utilities to remain caused by the construction work; repair such damage at no cost to Owner in manner approved by the applicable Utility.
4. Adjacent Buildings: Provide protection required by the General Conditions. Such protection includes occupants of said adjacent buildings, visitors, and passers-by from damage, injury and discomfort caused by dust.

B. Accessibility: Contractor shall not close or obstruct adjacent streets, walks or other occupied or used on-site facilities. Provide access to fire hydrants at all times.

PART 2 - PRODUCTS

2.01 BARRIERS, SAFETY GUARDS & WARNING LIGHTS

A. Provide for public protection as required by law and ordinance. Provide necessary fencing, enclosures, etc., as necessary to maintain safe pathways for students, staff and community as needed during deconstruction including site demolition work.

B. All other materials, not specifically described but required for proper completion of work of this Section including plastic sheeting shall be provided as selected by the Contractor subject to the approval of the Owner.

PART 3 - EXECUTION

3.01 LEED: Refer to section 01 35 63 Sustainable Certification Project Requirements for additional information relating to execution of the following LEED credits:

A. Sustainable Sites – Construction Activity pollution Prevention: Comply with provisions of 01 51 00 Temporary Facilities & Controls.

B. Materials & Resources – Construction Waste Management: Comply with provisions of Section 01 74 19 Construction And Demolition Waste Management.

3.02 EXAMINATION

A. Inspect and determine route of existing utility services to building scheduled for deconstruction and adjacent buildings.

3.03 PREPARATION

A. Reroute and connect utility services to adjacent structures and site improvements that may be disrupted by deconstruction operations.

B. Disconnect and cap utility services as required to protect personnel and existing improvements before starting removal work. Provide 72 hour notification to Owner of required disruption of service to adjacent improvements.

C. Disconnect and remove existing electrical utilities back to nearest pull box or vault outside the limit of demolition. Disconnect and remove existing wet utilities to 5 feet from outside of building. Cap and as-built exact locations.

1. Coordinate with utility companies and agencies as required.
2. Where utility cutting, capping, or plugging is required, perform such work in accordance with requirements of the public agency or utility company having jurisdiction.

D. Provide bracing and support, including field engineering, as required to protect persons and property from damage. Provide calibrated approved monitoring devices to detect movement in adjoining structure.

3.04 SALVAGE

A. Perform by methods which will preserve the material in its existing state of repair.

B. Provide cut surface which will permit joining of new work to existing improvements with a minimum exposure of the joint.

3.05 REMOVAL OPERATIONS

A. Do all demolition and clearing and grubbing work required for the completion of demolition work shown on Drawings and/or specified. Coordinate with separate hazardous materials abatement contractor for abatement work specified in Sections 02 82 13, 02 83 13 and 02 84 16, prior to commencing demolition work of this Section.

B. Demolish and remove building structure down to and including all concrete slabs, footings, foundations, and walkways associated with said building. Coordinate with respective utility companies for capping of affected utilities and services to said building; refer also to Paragraph 3.05A below.

C. Where demolition occurs next to existing above-grade work to remain, remove carefully only those items or portions of work required for placing new work.

D. Remove all loose material caused by or remaining from demolition work. Cut pavement and curbs neatly, ready for installation of new adjacent work. Use carborundum saws or approved means or devices where cuts will remain exposed in the completed work.

E. Remove debris from site. Dispose all said materials/debris to a lawful off-site disposal site as selected by Contractor, at Contractor's expense.

F. Sprinkle Work with water as needed to minimize dust. Provide hoses and water connections.

G. Contractor may retain any materials he desires where not otherwise indicated to be retained by the Owner. Contractor is responsible for completely removing all demolished materials from the site and disposing of them in accordance with all local, State and Federal Regulations.

H. Once the entire building, slab, foundation, and utilities are removed, provide all necessary plastic sheeting necessary for erosion control of embankments and exposed subgrades at removed structures; refer to Drawings and to Section 31 25 00 for additional requirements. Sheeting shall be properly pinned in place to prevent blow-off.

3.06 REPAIR

A. Backfill trenches, open pits and holes caused as a result of demolition and removal work.

B. Rough grade and compact areas affected by demolition to maintain site grades and contours.

C. Conform to additional requirements of Section 31 11 00.

END OF SECTION

PART 1 – GENERAL

1.01 GENERAL

A. Conform to the General Conditions, Supplementary Conditions, and related work in other Divisions for all work in Divisions 26. See Division 01 for sequence of work.

1.02 WORK INCLUDED

A. It is the intention of this division of the specifications and the accompanying drawings to describe and provide for the furnishing, installing, testing and placing in satisfactory and successful operation all equipment, materials, devices, and necessary appurtenances to provide a complete electrical system, together with such other miscellaneous installations and equipment hereinafter specified and/or shown in the plans. The work shall include all materials, appliances and apparatus not specifically mentioned herein or noted on the plans, but which are necessary to make a complete working installation of all electrical systems shown on the plans or described herein. Equipment and devices furnished and installed under other divisions of this specification (or by the Owner) shall be connected under this division. The drawings and specifications are complementary and what is called for in either is binding as if called for in both.

B. By submitting a bid, the Contractor is acknowledging that they have made a thorough examination of the Contract Documents, existing site and building conditions, and have determined that these documents do sufficiently describe the scope of construction work required under this Contract.

1.03 SCOPE OF BASIC BID

A. Included in Divisions 26 is all work and related items necessary to provide all electrical installations except as specifically excluded. In general, this includes all labor, equipment, tools, etc., to complete the electrical work.

1.04 RELATED WORK

A. Temporary Power and Lighting - See Section 01 51 00

B. Cutting and Patching - See Division 01

C. Trenching, backfill and asphalt work – See Division 02

1.05 STANDARDS AND REGULATIONS

A. The work shall comply with the latest edition of the applicable Standards and Codes of the following:

ASTM	American Society for Testing and Materials
CBM	Certified Ballasts Manufacturers
ETL	Electrical Testing Laboratories
IPCEA	Insulated Power Cable Engineers Associated
NBFU	National Board of Fire Underwriters
NEC	National Electrical Code
NESC	National Electrical Safety Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
U.L.	Underwriters Laboratories Inc.
WAC	Washington Administrative Code
WSEC	Washington State Energy Code
---	Federal, State, and Local Building Codes
---	State Electrical Code

B. If any conflict occurs between Government adopted Code Rules and this specification, the codes are to govern. Nothing in these drawings and specifications shall be construed to permit work not conforming with governing codes. Also, this shall not be construed as relieving the Contractor from complying with any requirements of the plans and specifications which may be in excess of, but not in conflict with, requirements of the Governing Codes.

1.06 PERMITS & FEES

A. The Contractor shall obtain and pay for all licenses, permits, and inspections required by laws, ordinances, and rules governing work specified herein. The Contractor shall arrange for inspection of work by the inspectors and shall give the inspectors all necessary assistance in their work of inspection.

B. The Contractor shall consult with and follow the requirements of the local fire, power, telephone, and television utilities serving the area and shall coordinate the work with them.

C. Utility connection and hook-up charges for power, telephone, and television shall be paid by the Owner directly to the utility. The Electrical Contractor is required to provide any and all coordination necessary to support the utility connection, file for application of service (or assist the Owner in filing for application of service) and coordinate dates for service with the utilities.

D. This project has utilized the electronic plan review submittal process for the applicable jurisdiction. The engineer will make available to the contractor an electronic version of the Approved Plans in PDF format on a USB thumb drive. The contractor shall include in their bid all costs associated with printing the plans, full size and in color, as required by the local Electrical Inspector.

1.07 DEFINITIONS

A. When "provide" is used, it shall be interpreted as "furnishing and installing complete in operating condition".

B. When "drawings" is used, it shall be interpreted as "all Contract Drawings for all disciplines".

C. When "Contractor" is used, it shall be interpreted as the Electrical Contractor.

1.08 INTENT OF DRAWINGS

A. The electrical drawings are intended to serve as working drawings for general layout. The equipment layout is diagrammatic and, unless specifically dimensioned or detailed, does not indicate all fittings, hardware, or appurtenances required for a complete operating installation.

B. Anything shown on the drawings but not covered in the specifications, or anything covered in the specifications but not shown on the drawings, shall be as if covered in both. In case of conflict between the drawings and specifications, the Engineer will select the method to be used. The Contractor shall be responsible for verifying all measurements before proceeding with the work.

C. Wiring diagrams are not intended to indicate the exact course of raceways or exact location of outlets. Raceway and outlet locations are approximately correct and are subject to revision as may be necessary or desirable at the time of installation. Precise location in every case shall be subject to the Engineer's approval.

1.09 PROTECTION

A. The Contractor shall store and guard all equipment before installation and shall protect same, and replace any equipment that has been damaged prior to final acceptance. See Division 01 for detailed requirements.

1.10 HOUSEKEEPING

A. All electrical materials shall be kept stored in an orderly fashion protected from heat, cold, and the weather.

B. All marred surfaces shall be refinished and painted after installation.

C. All debris shall be removed from premises during work, as directed, and at completion of job.

1.11 TEMPORARY USE

A. Temporary or interim use of any and all portions of the electrical system shall be under the supervision of the Electrical Contractor.

B. Temporary power and lighting for use during construction shall be provided per the requirements of the Division 01 specifications.

1.12 AS-BUILT DRAWINGS

A. The Contractor shall maintain, in addition to any reference drawings, an as-built set of prints, on which all deviations from the original design shall be drafted in a neat, legible manner with red colored pencil or pen. This red-lined set shall identify all drawing revisions including addenda items, change orders, and Contractor revisions. The Contractor is responsible to revise panel schedules and load calculations as required.

B. Drawings shall show locations of all concealed raceway runs larger than 1", giving the number of conductors and size of raceway. Underground ducts shall be shown with cross section elevations. All pipe, raceway, manholes or lines of other trades shall be included.

C. The Contractor shall update all references to specific products to indicate products actually installed on project. This shall include, but not be limited to, lighting fixtures, baseboard heaters, etc.

D. Upon completion of the Division 26 work, the Contractor shall deliver the red-lined drawings and one set of neatly drafted as-built drawings on electronic media in AutoCAD R-2013 format and full-size PDF to the Engineer for transmittal through the Engineer to the Owner.

1.13 WARRANTY

A. Provide a written warranty that the Division 26, 27, and 28 work is free from mechanical and electrical defects. Contractor shall replace and repair, to the satisfaction of the Engineer, any parts of the installation which may fail within a period of 12 months after the date of substantial completion, provided that such failure is due to defects in material or workmanship, or failure to follow the specifications and drawings.

B. See Section 27 00 00 for additional requirements of low voltage systems.

1.14 INSTRUCTIONS AND MANUALS

A. Operation and maintenance data shall be submitted in accordance with Section 01 78 23.

B. Manuals shall contain shop drawings, wiring diagrams, operating and maintenance instructions, replacement parts lists, and equipment nameplate data for all equipment and systems installed under the project. Signal equipment submittals shall contain step-by-step circuit description information designed to acquaint maintenance personnel with equipment operation in each mode of operation. Manuals shall contain original brochures supplied by manufacturers. Copies of originals will not be accepted.

C. Each type of device provided shall be identified in the O & M Manual using the same identification as shown on the drawings and specifications. The information included must be the exact equipment installed, not the complete "line" of the manufacturer. I Installed equipment shall be neatly and clearly identified on sheets where both installed equipment and other equipment are shown. Parts lists shall give full ordering information assigned by the original parts manufacturer. Relabeled and/or renumbered parts information as reassigned by equipment supplier are not acceptable. The following information shall be provided for each device:

1. Manufacturer's name, address, and phone number.
2. Local supplier's name, address, and phone number.
3. Complete parts lists including quantities and manufacturer's part numbers.
4. Installation instructions.
5. Recommended maintenance items including maintenance procedure and recommended interval of maintenance listed in hours of operation, calendar unit or other similar time unit.

1.15 WORK NOT INCLUDED

A. Indicated motors, controls, and equipment as described in other divisions shall be furnished by other trades, but shall be moved, set, and wired to electrical controls and power supply by the Electrical Contractor.

B. Work to be included under this Contract shall be defined on drawings and in these specifications. Any details beyond these limits are meant only to give installation clarity to that portion which is a part of this Contract.

1.16 COMPLETION OF WORK

A. Upon completion of the Division 26 work, the Contractor shall comply with requirements of Section 01 70 00 for project closeout.

B. Arrange for and obtain all required inspections and certificates pertaining to the Division 26 work and deliver the certificates to the Engineer in triplicate.

C. Prior to or at the time of final inspection, the Contractor shall, as outlined in detail in the specifications, complete the delivery of all the following items:

1. Completion Letter
2. Certificate of Final Inspection.

	Electrical Inspector Fire Department	COMPLETION OF WORK 26 00 00 – 1.17
3.	Warranty to Owner (with copy for Engineer)	SUPPLEMENTARY GENERAL CONDITIONS 26 00 00- 1.13
4.	Marked Set of As-Built Electrical Drawings	GENERAL AS-BUILT DRAWINGS 26 00 00– 1.12
5.	Marked Set, Electronic Media Set on Solid-State Drive-in AutoCAD R-2013 Format, and full-size PDF of As-Built Electrical Drawings	GENERAL AS-BUILT DRAWINGS 26 00 00– 1.12
6.	Certificate of Completion and Document Requirements for Protective Device Study	ELECTRICAL SYSTEM PROTECTIVE DEVICE STUDY 26 05 73

7.	OHMIC Test Readings	GENERAL, TESTS 26 05 19 – 3.03 (B)
8.	Certificate of Feeders Torque Results	WIRES AND CABLES 26 05 19
9.	Wiring diagrams, Maintenance Manuals, Operation Instructions, and Brochures (5 sets minimum)	GENERAL, INSTRUCTIONS & MANUALS – 26 00 00– 1.14

* Secure delivery instructions from Architect for delivery to Owner.

1.17 SHOP DRAWING SUBMITTALS

A. This Contractor shall submit to the Architect as described in Section 01 60 00. When shop drawings are submitted electronically, they shall be submitted as described in Paragraph B below.

B. The Contractor shall submit to the Architect electronic shop drawings in PDF format. Electronic Shop Drawings that are submitted without following the format as outlined below will be returned for corrections without any further review.

1. A separate PDF file shall be submitted for each Division including All submittal items for that Division as outlined below:

   a. Division 26 – Electrical

2. The contractor shall provide either a digital or hardware method of transporting the electronic submittal to the Architect. Files larger than 10Megabytes shall not be sent via email and shall be transferred via a file transfer protocol, PC compatible CD or PC compatible thumb drive. Divisions shall not be broken up into separate files for transfer via email.

3. Each Specification PDF shall be submitted with the following format and salient attributes:

   a. Cover page including:

      i. Project Title as indicated on the plans

      ii. Project Location including address, city, state, country

      iii. Prime Contractor name, phone number, and email address

      iv. Sub-Contractor name, phone number, and email address

      v. Specification Division number and title

   b. Index Page outlining each specification section included in the submittal. This list shall be linked to a corresponding Specification Section Divider for each section. This link shall enable the reviewer to jump to a specification section by clicking the item in the list.

   c. Specification Section Divider: Shop Drawings shall be divided by specification section and each section shall begin with a divider page outlining the Specification number, title, and a list of submittal items for the section. In the upper right-hand corner of the divider page, a link shall be provided returning the reviewer to the Index Page.

   d. Each Submittal Item listed on the Specification Section Divider shall be linked to the specific item being submitted. Each Submittal Item shall be highlighted yellow with a note reference to the specific paragraph giving the submittal requirements.

e. Each page of the submittal shall be numbered in the bottom right corner of the page. Page numbering shall be Roman numerals for all pages before the First Specification Section. Each Specification Section page shall be numbered with the Specification Section number, a dash, and the page number in the Specification Section.

f. Specification items shall be specifically highlighted as they apply to the project rather than highlighting an entire product family. Items that do not apply to this project shall be crossed out with a red “X”.

g. The PDF file shall not be protected to prevent printing, selecting of text within the document, or extracting of pages from the document.

C. Shop drawings shall be submitted complete, at one time, and with each item indexed with dividers and separated per specification section and shall include, at a minimum, the items of equipment listed below:

1. Fuses and spare fuse cabinet
2. Wiring Devices
3. Back Boxes
4. Cover plates
5. Raceways and Connectors
6. Copper Wire
7. **All Specialty Systems not listed above**
8. Any other items requested by Engineer.

D. Within ten (10) working days after the date of the letter rejecting any items of equipment, lighting fixtures, or materials as not in accordance with the specifications, the Contractor shall submit a new list of items to furnish and install in place of those items rejected. If the Contractor fails to submit this new list within the above specified time, or if any items on this second list are rejected as not being in accordance with these specifications, the Engineer may select the items which the Contractor shall furnish and install without change in Contract price or time of completion.

E. The acceptance of a manufacturer’s name or product by the Engineer does not relieve the Contractor of the responsibility for providing materials and equipment which comply in all details with the requirements of the Contract Documents. The Contractor shall be solely responsible for submitting materials at such a time to allow a minimum of two weeks for Engineer’s review.

F. Electrical Drawings for the project have been developed by the Engineer using AutoCAD Revision 2013 software or newer. These drawing files will be made available to the Contractor for development of shop drawings and/or As-Builts with a signed waiver of responsibility.

1.18 SCHEDULE OF VALUES

A. Provide Schedule of Values per Division 01 and related project requirements.

B. Divisions 26, 27, and 28 Breakdown: Provide schedule of values for the following categories (as a minimum):

1. Electrical Mobilization
2. Electrical Submittals
3. Electrical General Project Management, General Design, General Coordination
4. Branch Circuit Materials Rough-in

5. Branch Circuit Materials Rough in – Labor
6. Feeder Materials
7. Feeder Materials - Labor
8. Commissioning
9. Electrical Punchlist, Closeout, and Owner Training

*Provide engineering/shop drawings, material, and labor for each system. Engineering/shop drawings shall be 10% of the labor and material value.

C. The dollar value for "Electrical Punchlist, Closeout, and Owner Training" shall in no case be less than 2% of the total dollar value of the Division 26, 27, and 28 work (or as indicated in Division 01, whichever is higher).

D. The Contractor is advised that in addition to payments held out for retainage and project final completion (i.e., "Electrical Punchlist, Closeout, and Owner Training"), as specified above and in Division 01, the Owner reserves the right to withhold 10% of the funds for any of the above categories until the systems (of that category) have been proven to operate as specified and have been completely tested and adjusted.

PART 2 – PRODUCTS

2.01 COMPETITIVE PRODUCTS

A. Any reference in the specifications to any article, device, product, material, fixture, form, or type of construction by name, make, or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. The Contractor, in such cases, may use any article, device, product, material, fixture, form, or type of construction which in the judgment of the Engineer, expressed in writing, is equal to that specified. However, any manufacturer not listed as an accepted bidder for a specific item must be submitted for acceptance in writing in accordance with Section 01 60 00.

2.02 MANUFACTURER/EQUIPMENT PRIOR APPROVALS

A. Any manufacturer/equipment not listed as an approved substitute for a specified item must be submitted for acceptance in accordance with Section 01 60 00, in writing, with detailed information to include:

1. Manufacturer's Catalog Data
2. Complete Physical and Technical Data
3. Wiring Diagrams
4. Detailed reference (written or highlighted) noting compliance with the appropriate Specification Section and all applicable Specification item numbers within that Section
5. Complete type written index cross referencing all proposed substitutes and specified items
6. Detailed reference to specified items (written or highlighted) noting equal quality and performance of proposed substitute equipment
7. Other descriptive data, as required by the Engineer

B. If substitute material is determined to be acceptable by the Engineer, it will be included in a subsequent Addenda prior to bidding. The acceptance of a manufacturer's name or product by the Engineer does not relieve the Contractor of the responsibility for providing materials and equipment which comply in all details with the requirements of the Contract Documents.

C. Only materials which are specified or published in addenda as acceptable shall be used.

2.03 MATERIALS

A. All materials must be of the quality herein specified. All materials shall be new, of the best quality, and free from defects. They shall be designed to ensure satisfactory operation and operational life in the environmental conditions which will prevail where they are being installed.

B. Each type of material shall be of the same make and quality. The materials furnished shall be standard products of the manufacturers regularly engaged in the production of such equipment and shall be the manufacturer's latest standard design.

C. All materials shall be U.L. or E.T.L. listed for the purpose for which they are used.

D. Equipment in compliance with U.L. standards but not bearing their label is not acceptable. If the manufacturer cannot arrange for labeling of an assembled unit at the factory the unit shall be field evaluated per the Washington State Administrative Code (WAC) and the electrical inspector's requirements.

2.04 COMPLETE SYSTEM

A. All the systems mentioned shall be complete and operational in every detail except where specifically noted otherwise. Mention of certain materials in these specifications shall not be construed as releasing the Contractor from furnishing such additional materials and performing all labor required to provide a complete and operable system.

2.05 NAMEPLATES

A. Provide nameplates constructed of plastic (black on white) laminated material engraved through black surface material to white sublayer (attach with screws on NEMA 1 enclosures). EXCEPTION (1): Emergency distribution system component labeling - white letters on red background. Exception (2): Series rated systems shall be yellow background with white letters.

1. Service Entrance Label: Refer to Section 26 24 13.
2. Panelboard Labels: Refer to Section 26 24 16.
3. Switch and Receptacle Labels: Refer to Section 26 27 26.
4. Motor Starter and Disconnect Labels: Refer to Section 26 28 16.
5. Special Equipment/Outlet Labels: Refer to Appropriate Sections.
6. Under 600 Volt Feeder Tags: Refer to Section 26 05 19.

PART 3 – EXECUTION

3.01 LEED

A. Refer to Section 01 35 63 Sustainability Certification Project Requirements for additional information relating to execution of the following LEED credits:

1. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls.
2. Energy & Atmosphere – Fundamental Building Commissioning and Verification: Comply with provisions of Section 01 90 00.

3.02 GENERAL

A. Careful consideration shall be given to clearances under and over beams, pipes and ducts, to provide proper headroom in all cases. Check drawings to determine heights of all suspended ceilings and size of pipe shafts where raceway and wire-ways shall run. Coordinate installation of Divisions 26, 27, and 28 wiring and equipment with Division 23 and other trades. Where insufficient room for proper installation appears, obtain clarification from Engineer before any installation begins.

B. Cutting and Patching:

1. Obtain permission from the Architect and/or Owner's Representative prior to cutting. Locate cuttings so they will not weaken structural components. Cut carefully and only the minimum amount necessary. Cut concrete with diamond core drills except where space limitations prevent the use of such drills.

2. All construction materials damaged or cut into during the installation of this work must be repaired or replaced with materials of like kind and quality as original materials by skilled labor experienced in that particular building trade.

3.03 COORDINATION

A. The Contractor is responsible for accomplishing work contained within Divisions 26, 27, and 28. The work shall coordinate with that of the other Contractors and/or other trades doing work in the building. The contractor shall examine all drawings, including the several divisions of mechanical, structural, civil and architectural, for construction details and necessary coordination. Specific locations of construction features and equipment shall be obtained from the Contract Documents, field measurements, and/or from the trade providing the material or equipment. No extra costs will be allowed for failure to obtain this information.

B. All conflicts shall be reported to the Engineer in writing before installation for decision and correction. Special attention is called to the following items:

1. Door swings to the end that switches will be located on "Strike" side of the door.

2. Location of grilles, pipes, sprinkler heads, ducts, and other mechanical equipment so that all electrical outlets, lighting fixtures, and other electrical outlets and equipment are clear from and in proper relation to these items.

3. Location of cabinets, counters, and doors so that electrical outlets, lighting fixtures, and equipment are clear from and in proper relation to these items.

4. Type and height of ceiling.

5. All device measurements referenced on drawings or specifications are to be centered of device unless noted otherwise.

C. The Contractor will not be paid for work requiring reinstallation due to lack of coordination or interference with other Contractors or trades. This includes, but is not limited to, removing, replacing, relocating, cutting, patching, and finishing.

D. The Contractor shall review the installation manual for each device to be installed. If a conflict appears to occur between the manufacturer's recommended installation practices and the plans or specifications, notify the Engineer immediately. Final determination shall be by the Engineer. The Contractor will not be paid for reinstallation due to failure to comply with manufacturer instructions or design documents.

E. Device and fixture locations may be changed within 15 feet without extra charge if so desired by the Engineer, before installation.

3.04 REQUESTS FOR INFORMATION (RFI)

A. It is our intent to provide a timely response for RFIs regarding Division 26, 27, and 28 Work. To further expedite this process, where a suggestion can be determined or derived at by the initiator of the RFI, it is required this suggestion be supplied with the submitted RFI. If no suggestion is given where one is possible, the RFI will be returned as incomplete.

3.05 CLEANING AND PAINTING

A. All equipment, whether exposed to the weather or stored indoors shall be covered to protect it from water, dust and dirt.

B. After installing, all metal finishes shall be cleaned and polished, cleaned of all dirt, rust, cement, plaster, grease, and paint.

C. All equipment with a primer coat of paint shall be given two (2) or more coats of a finish enamel and scratched surfaces be refinished to look like new. Markings, identification, and nameplates shall be replaced.

D. Dispose of all waste material in compliance with project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

3.06 EQUIPMENT IDENTIFICATION

A. Provide identifying engraved Bakelite nameplate on all equipment, including pull boxes, to clearly indicate its use, area served, circuit identification, voltage, and any other useful data.

B. Each auxiliary system, including communications, shall be clearly labeled to indicate its function.

3.07 DEVIATION

A. Deviation from the shop drawings in construction or installation of equipment shall not be made unless Shop Drawings showing proposed deviations are submitted to and approved by the Engineer. If any equipment is furnished under this or other divisions with current, voltage, or phase ratings that differ from those shown on the drawings, the Contractor shall notify the Engineer in writing immediately and shall not connect said equipment until instructed as to required changes by the Architect. No extension of time will be granted as a result of such changes.

3.08 EXCAVATIONS

A. All excavations are to be conducted so that no walls or footings shall be disturbed in any way.

B. Remove all surplus earth not needed for backfilling and dispose of same as directed.

C. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Control.

3.09 WIRING METHODS

A. All low voltage wiring shall be in raceway with junction boxes and fittings where concealed in walls, in inaccessible ceiling space, or where exposed in finished or unfinished areas.

B. Provide conduit sleeves through all walls to accommodate all low voltage cabling. Conduit sleeves shall be sized to allow for 40% future spare capacity.

C. All branch circuit wiring shall be installed in raceway with junction boxes and fittings.

D. Provide access panels as needed for pull boxes and equipment located above ceiling or behind walls.

E. All emergency systems outlet and junction boxes shall have a red plastic tag inside marked critical or life safety as applicable.

F. Multiple feeder runs shall be rod hung, using a strut type channel with individual one-hole clamps, back plates, and machine screws.

G. Any low voltage cables that are not terminated at both ends shall be tagged and labeled per code.

H. See Section 27 00 00 for additional requirements of low voltage systems.

3.10 PENETRATIONS OF FIRE RATED ELEMENTS

A. Penetrations of fire rated elements must be made such as to retain that rating. See architectural sheets for specific fire rated locations.

3.11 HANGERS AND SUPPORTS

A. Provide hangers, brackets, and suspension rods and supplementary steel to support equipment.

B. Hangers provided under other divisions shall not be used for support of Division 26, 27, or 28 equipment unless permitted by Architect/Engineer.

3.12 CHASES AND OPENINGS

A. Provide to the masonry and concrete trades all templates and details of chases, openings in floors, and walls as required for Division 26, 27, and equipment installation.

3.13 PAINTING

A. Painting in general will be covered under another division of this specification, except items furnished under Divisions 26, 27, and 28 that are scratched or marred in shipment or installation and shall be refinished by the Division 26 Contractor.

3.14 WORKMANSHIP AND OBSERVATION

A. Workmanship shall be of the best quality and none but competent workers shall be employed under the supervision of a competent foreman. All completed work shall represent a neat, professional appearance.

B. All work and materials shall be subject to observation at any and all times by representatives of the Engineer.

3.15 MISCELLANEOUS

A. Provide complete seismic anchorage and bracing for the lateral and vertical support of conduit and electrical equipment, as required by the International Building Code.

B. Conduits that cross seismic separations shall be installed with flexible connection suitable to accommodate conditions. Secure raceways on each side of a separation and provide a minimum of 36” length of flexible conduit to span separation.

3.16 CABLE AND WIRING ROUTED UNDERGROUND OR UNDERSLAB

A. All cables and conductors, both line voltage and low voltage, routed underground or underslab shall be U.L. listed for installation in wet locations per NEC and WAC codes.

END OF SECTION

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Portions of the existing electrical lighting, power, and signal systems are to be removed as detailed on the drawings.

1.02 RELATED DOCUMENTS

A. Section 26 00 00 – Electrical General Conditions

PART 2 – PRODUCTS

2.01 EXISTING MATERIALS

A. Existing materials which are a part of the building shall remain the property of the Owner, unless directed by the Owner to be removed.

B. It is the Contractor's responsibility to include in the bid all costs associated with necessary demolition to allow new construction shown in the Contract Documents, unless specifically noted otherwise. The Contractor shall remove all existing receptacles, lighting fixtures, low voltage devices, backboxes, abandoned raceways, conductors, and any auxiliary items to allow for new construction and finish work to occur as complimented by the Contract Documents.

C. Contractor is responsible for removal of electrical connections, disconnect switches, and starters for all mechanical equipment scheduled to be demolished. The Contractor shall check all demolition plans and actual field conditions for unit locations.

D. Areas not included in the scope of work or not included as part of the phasing schedule shall remain fully operational.

2.02 EXISTING MATERIALS NOT TO BE RE-INSTALLED

A. In coordination with the Architect/Engineer, these materials shall be made available for inspection and decision as to whether the Owner will retain possession. Items selected for retention shall be delivered to a location on the premises selected by the Owner and shall be turned over accordingly. Take reasonable care to avoid damage to this material. If the Contractor fails to conform to this requirement, they shall purchase and turn over to the Owner replacement materials of like kind and quality.

B. All material not selected for retention by the Owner and debris shall be disposed of by the Contractor. This shall include, but not be limited to, removal of PCB type ballasts and fluorescent lamps which shall be disposed of in accordance with EPA requirements.

C. Electrical Contractor shall coordinate with the Hazardous Abatement Contractor on panelboards that may be identified by them as needing abatement and assist them in disconnecting power and notifying them when the abatement can occur.

PART 3 – EXECUTION

3.01 EXISTING CONDITIONS

A. Examine the structure, building, and conditions under which Division 26 work is to be installed for conditions detrimental to proper and timely completion of the work. Do not proceed with work until deficiencies encountered in installation have been corrected. Report any delay or difficulties encountered in installation of Divisions 26, 27, and 28 work which might be unsuitable to connect with work by other divisions of this specification. Failure to report conditions shall constitute acceptance of other work as being fit and proper for the installation of Divisions 26, 27, and 28 work.

B. Electrical Contractor to provide circuit tracing of all existing circuits in all areas that are to remain, be reused and/or relocated to new panels.

C. Maintain continuity of existing circuits of equipment to remain. Existing circuits of equipment shall remain energized. Circuits which are to remain but were disturbed during demolition shall have circuits, wiring, and power restored back to original condition.

D. This is a multiple phased occupied facility. The Electrical Contractor is responsible to maintain full operation of all systems in the occupied portions of the facility. Failure to do so will result in liquidated damages.

3.02 DEMOLITION

A. Switchboards, panelboards, signaling systems, other electrical equipment free standing (or surface mounted), raceway (exposed) and conductors no longer in service as a result of this Contract shall be removed. Unused raceways or sleeves shall be cut flush at ceiling, floor or wall and filled with grout.

B. At the completion of the project, the end product shall have a finished appearance. All abandoned or temporarily utilized material shall be removed.

3.03 NEW DEVICES IN REMODEL AREAS

A. Provide surface mounting for devices on existing CMU walls. Where existing boxes are indicated to be reused, extend box as necessary and provide new devices and plates.

3.04 EXISTING PANELBOARD

A. Any modifications made to existing panels must be incorporated into the existing circuit index on the panel. If more than three circuits are modified a new typewritten index incorporating the changes to the existing index shall be installed in the existing panel.

B. Listing shall match circuit breaker arrangements, typically with odd numbers on the left and even numbers on the right. Room numbers used shall be final room numbers used in the building as verified with the Owner.

3.05 CLEANING

A. Dispose of all waste material in compliance with the project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

END OF SECTION

PART 1 – GENERAL

1.01 GENERAL INCLUDES

A. Excavation and Associated Grading

B. Trenching and Trench Protection

C. Backfilling and Compaction

D. Verification of Existing Utilities

E. Protection of Utilities

1.02 RELATED SECTIONS

A. Section 26 00 00 – Electrical General Conditions

B. Section 26 05 33 - Raceways

1.03 QUALITY ASSURANCE

A. Inspection of Job Conditions: Prior to starting work and during work, the installer shall examine the work by others, and shall evaluate site and job conditions under which excavation, trenching, and backfilling for underground utilities work will be performed, and notify the General Contractor in writing of unsatisfactory conditions or work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

B. Codes and Standards: Comply with requirements of the following Codes and Standards (Latest Edition) except as modified herein:

1. International Conference of Building Officials, "International Building Code".
2. Local requirements for all utility work.
3. OSHA and WISHA regulations.
4. APWA Standard Specifications.
5. National Electrical Code – NFPA 70.

1.04 RESPONSIBILITY

A. The Contractor is solely responsible for compliance with the requirements of the drawings, specifications, local codes and standards, proper construction coordination with work of other trades, and protection and worker's safety. Contractor shall advise Engineer of any discrepancy in, or disagreement with the specifications and/or drawings prior to starting work and not proceed until issue is resolved. Commencement of work shall indicate Contractor's acknowledgement of their expertise in this type of work. Any delay resulting from failure to comply with this procedure will not be basis for an extension of the completion date.

1.05 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced.

B. American Society of Testing and Materials (ASTM) Publications:

1. D 422-63 Particle Size Analysis of Soils.
2. D 423-66 Liquid Limit of Soils.
3. D 424-59 Plastic Limit and Plasticity Index of Soils.
4. D 1557-78 Moisture Density Relations of Soils using a 10 lb. (4.54kg) Rammer and 18 inches (457 mm) Drop.

5.	D 2167-66	Density of Soil In-Place by the Rubber Balloon Method.
6.	D 2217-66	Wet preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Contents.
7.	D 2487-69	Classification of Soils for Engineering Purposes.
8.	D 2922-81	Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
9.	E 548-79	Generic Criteria for Use in the Evaluation of Testing and Inspection Agencies.

PART 2 – MATERIALS

2.01 SATISFACTORY MATERIALS

A. Materials classified as ASTM D2487, Unified Soil Classification System as SW, SP, GW, and GP are satisfactory for backfill use. Materials classified as SP-SM, GP-GM, GM, GC and ML are also satisfactory for backfill use provided that they contain moisture contents suitable for the intended use and are reasonably free of organic matter. Native material, not considered unsatisfactory as specified below, may comply. Except that no material shall have any object with a dimension exceeding 2 inches and no object shall be sharply angular.

2.02 UNSATISFACTORY MATERIALS

A. Materials classified in ASTM D2487, Unified Soil Classification System as PT, OH, and OL are unsatisfactory. Unsatisfactory materials also include man-made fills, refuse and all materials containing excessive organic matter or having moisture contents which are not suitable for the intended use, or having objects with dimensions exceeding 2 inches (boulders, etc.).

2.03 UNSTABLE MATERIAL

A. Unstable material shall consist of material too wet to properly support the utility conduit or appurtenance structure, and material identified as unsuitable in the National Electrical Code 300-5(F).

2.04 GRAVELLY SAND BORROW MATERIAL

A. Gravelly sand borrow material to provide backfill, or replace unsuitable soil, shall meet the requirements of SW, SP, GW, and GP materials, except that the maximum percentage passing the No. 200 sieve shall not exceed 5% based on the soil fraction passing the U.S. No. 4 sieve, and not contain discrete particles greater than 2 inches in diameter.

2.05 DEGREE OF COMPACTION

A. Degree of compaction shall be expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D1557, Method D. Minimum compaction requirements shall be as specified in PART 3.

2.06 DRAINAGE GRAVEL

A. Shall be 3/4-inch washed gravel with no more than 2% passing 1/2-inch sieve opening.

2.07 SPECIAL BEDDING AND INITIAL BACKFILL MATERIAL

A. Minus 3/8-inch washed pea gravel.

PART 3 – EXECUTION

3.01 LEED

A. Refer to Section 01 35 63 Sustainability Certification Project Requirements for additional information relating to execution of the following LEED credits:

1. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls.

3.02 EXCAVATION

A. If workers enter any trench or other excavation four or more feet in depth that does not meet the open pit requirements of WSDOT Section 2.09.3(3)B, it shall be shored and cribbed. The Contractor alone shall be responsible for worker safety. All trench safety systems shall meet the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW.

B. Excavation of every description and of whatever substances encountered shall be performed to allow the installation of all utilities at the lines and grades as required. During excavation, material satisfactory for backfilling shall be stockpiled in an orderly manner at a distance from the banks of the trench sufficient to avoid overloading and to prevent slides or cave-ins. Adequate drainage shall be provided for the stockpiles and surrounding areas by means of ditches, dikes, or other approved methods. The stockpiles shall also be protected from contamination with unsatisfactory excavated material or other material that may destroy the quality and fitness of the suitable stockpiled material.

C. If the Contractor fails to protect the stockpiles and any material becomes unsatisfactory as a result, such material shall be removed and replaced with satisfactory on-site or imported material from approved sources at no additional cost to the Owner.

D. Excavated material not required or not satisfactory for backfill shall be removed from the site and shall be disposed of off site, at the Contractor's expense, at the Contractor's waste area. Any excess satisfactory excavated materials shall not be mixed with unsatisfactory materials. Unsatisfactory materials shall not cover available suitable materials, or be disposed of in such a manner as to interfere with subsequent borrow operations.

E. Grading shall be done as may be necessary to prevent surface water from flowing into the excavation, and any water accumulating therein shall be removed so that the stability of the bottom and sides of the excavation is maintained. Unauthorized over-excavation shall be backfilled in accordance with paragraph 3.05 BACKFILLIING at no additional cost to the Owner.

F. The Contractor shall provide dewatering as required for installation of underground work.

3.03 TRENCH EXCAVATION

A. The trench excavation shall meet the requirements of the National Electrical Code and local utility standards.

B. Bottom Preparation: The bottoms of trenches shall be accurately graded to provide uniform bearing and support for the bottom quadrant of each section of the conduit and for bedding. Stones of 2 inches or greater in any dimension, or as recommended by the conduit manufacturer, whichever is smaller, shall be removed to avoid point bearing.

C. Removal of Unsuitable Material: Where unsuitable material is encountered in the bottom of the trench, such material shall be removed to the depth directed and replaced to the proper grade with select granular material as provided in paragraph 3.05 BACKFILLING. When removal of unsuitable material is required due to the fault or neglect of the Contractor in their performance of the work, the resulting material shall be excavated and replaced by the Contractor without additional cost to the Owner.

D. Bedding: The bedding surface for the conduit shall provide a firm foundation of uniform density throughout the entire length of the conduit. The conduit shall be bedded carefully in a soil foundation accurately shaped and rounded to conform to the lowest one-fourth of the outside portion of circular conduit or to the lower curved portion of conduit arch for the entire length of pipe or arch. When necessary, the bedding shall be taped. Provide bedding using pea gravel where noted on the drawings.

3.04 EXCAVATION FOR APPURTENANCES

A. Excavation for manholes, handholes or similar structures below grade shall be sufficient to leave at least 12-inches clear between the outer structure surfaces and the face of the excavation or support members. When concrete or masonry is to be placed in an excavated area, special care shall be taken not to disturb the bottom of the excavation. Excavation to the final grade level shall not be made until just before the concrete or masonry is to be placed.

3.05 JACKING, BORING, AND TUNNELING

A. Unless otherwise indicated, excavation shall be by open cut, except that sections of a trench may be jacked, bored, or tunneled if the raceway, cable or duct can be safely and properly installed and backfill can be properly tamped in such sections.

3.06 BACKFILLING

A. Backfill material shall be compacted to 6" layers and as specified in Paragraph 3.06-Compaction.

1. Trench Backfill: Trenches shall be backfilled to finish grade.
2. Replacement of Unstable Material: Unstable material removed from the bottom of the trench of excavation shall be replaced with select granular material or gravel borrow placed in layers not exceeding 6 inches loose thickness.
3. Bedding and Initial Backfill: Bedding shall consist of satisfactory materials. Initial backfill shall be in 6-inch lift.

3.07 COMPACTION

A. Each layer of fill, or the excavated subgrade, shall be compacted to at least 95%, per ASTM D1557, of laboratory maximum density. Compaction shall be accomplished by approved tamping rollers, pneumatic-tired rollers, three-wheel power rollers, or other approved compaction equipment.

3.08 PROTECTION

A. Newly graded excavated or bedded areas shall be protected from traffic and from erosion, and any settlement or washing away that may occur from any cause, prior to acceptance, shall be repaired and grades reestablished to the required elevations and slopes.

3.09 CLEANING

A. Dispose of all waste material in compliance with the project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

END OF SECTION

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Provide all wire, cable, and terminations complete.

1.02 RELATED DOCUMENTS

A. Section 26 00 00 – Electrical General Conditions

PART 2 – PRODUCTS

2.01 WIRE AND CABLE (COPPER, 600-VOLT)

A. Interior and Above Grade: All wires to be Type THW or RHW. Type THWN/THHN or XHHW wire may be utilized at Contractors' option, subject to Code requirements. Wire and cables shall be brought to the project in original containers bearing the Underwriter's label. Provide Type AVA wire where conductors are subject to temperature above 167 °F.

B. Underground: All conductors to be type USE. Increase raceway size when necessary to accommodate conductors per Code. Exception: underground conductors completely contained in Code recognized raceway and boxes may be Type THW, THWN or XHHW.

2.02 WIRE AND CABLE (ALUMINUM, 600-VOLT)

A. May be used at Contractor's option (except for ground cable) subject to the following requirements:

1. Increased size for same current capacity (increased raceway size may be necessary).
2. No aluminum conductors smaller than #4 AWG shall be used.
3. Insulation requirements are the same as for copper conductor wires and cables.
4. Aluminum conductors shall be made of an AA-8000 series electrical grade aluminum alloy conductor material.

2.03 SPLICES

A. Above Grade: Solderless type only. Pre-insulated "twist-on" type (limited to size #10 and smaller). Bolt on compression type with application of preformed insulated cover, heat shrinkable tubing or plastic insulated tape acceptable for all sizes.

B. Below Grade: Splices below grade shall be in handholes and shall be made watertight with epoxy resin type splicing kits similar to Scotchcast.

2.04 TERMINATIONS

A. Compression set, bolted or screw terminal.

B. Conductors #12 and smaller shall utilize eye or forked tongue type compression set terminator when termination is to a bolted or screw set type terminal block or terminal cabinet.

2.05 PLASTIC CABLE TIES

A. Nylon or Equivalent, locking type.

PART 3 – EXECUTION

3.01 GENERAL

A. Install all wiring in raceway unless shown or specifically authorized otherwise.

3.02 WIRE SIZE

A. No. 12 AWG minimum for power and lighting circuits.

B. Provide solid wire for No. 10 AWG and smaller, and stranded conductors for No. 8 AWG and larger (600) volts.

3.03 TESTS

A. In addition to the factory testing of all equipment and cable, the Contractor shall test all wiring connections for continuity and ground before any fixtures or other loads are connected. Tests shall be made with a 500V minimum DC "Megger" type tester. If tests indicate faulty insulation (less that 2 megohms), such defects shall be corrected and tested again. Contractor shall provide all apparatus to make tests and shall bear all expenses of required testing. Routine operation tests shall be made on all pieces of equipment to demonstrate that working parts are in operating condition. Results of all tests shall be recorded and submitted to the Architect. The Contractor shall immediately replace all parts, which fail to pass the test.

B. Measure the OHMIC value of the Electric Service Entrance metallic "System Ground" with reference to "Earth Ground" using the "Multiple Ground Rod Fall-In-Potential" method and suitable instruments. Maximum resistance to ground shall be less than 10 ohms. If this resistance cannot be obtained with the ground system shown, notify the Architect immediately for further instructions. Provide OHMIC test results to Engineer.

C. All circuits both in and out of the building shall test out free of grounds, short circuits and other defects.

D. Check and record catalog number and ampere size of controller overload heaters installed, nameplate full-load amperes, and actual operating amperes of each motor. IMPORTANT: Submit recorded data in triplicate to the Engineer. Check proper load balance on the electrical system, direction of rotation, lubrication, and overload protection of all motors before placing in operation.

E. Provide a log of ampere reading for all panels from phase to neutral for 4 wire panels and from phase to phase for 3-wire panels. These readings shall be taken with all loads activated.

F. The final test of all equipment shall be made on dates designated by the Architect/Engineer and all readings shall be made in their presence.

G. Feeders shall be checked to ensure all phases are energized before connecting to their respective motors. Each motor shall rotate in the proper direction for its respective load. Prior to rotation test, all bearings shall be inspected for proper lubrication.

H. Minimum megger test for equipment shall be as follows:

Equipment Maximum Voltage Rating	Minimum Test Resistance
1,000-Volts or less	2 Megohms

I. Provide certification of torque values for feeder and service entrance conductors per equipment manufacturer's recommendation.

3.04 CONDUCTOR SIZES, REFERENCED ON PLANS

A. Copper, type THW or RHW unless noted.

3.05 ALUMINUM CONDUCTORS

A. Aluminum conductors serving switchboards and service entrance rated panelboard shall be terminated using compression type oxide inhibiting compound filled aluminum lugs only.

B. Compression fittings shall be sized for the conductor used and shall be set with a tool, which assures a preset deformation before release.

C. Aluminum lugs, where in contact with copper studs, bolts or bus, shall be plated.

D. Bolted aluminum lugs shall be installed with a Belleville washer under nut unless specifically permitted otherwise.

E. Branch panelboards with bolted pressure lugs shall use aluminum conductors designed to minimize creep - Stabiloy by ALCAN, or equal. Oxide inhibiting joint compound shall be applied to both the conductor and terminal lug. Manufacturer's torque specifications shall be used to prevent creep.

3.06 PULLING

A. Use no mechanical means for pulling No. 8 AWG conductors and smaller. Powdered soap stone or approved spray cream shall be the only lubricant used.

3.07 STRIPPING INSULATION

A. Do not ring the cable, always pare or pencil.

3.08 TAPING

A. If used shall be half lapped synthetic tape.

3.09 CONDUCTORS IN PANELS AND SWITCHBOARDS

A. Conductors in panels, switchboards, and terminal cabinets shall be neatly grouped and formed in a manner to "Fan" into terminals with regular spacing.

3.10 CABLE SUPPORTS

A. Provide conductor support devices as required by code in vertical cable runs.

3.11 RACEWAY SIZES REFERENCED ON DRAWINGS

A. Raceways are sized for copper, type THW, unless otherwise noted. Size all raceways per code unless specifically noted to be larger on the drawings.

3.12 CLEANING

A. Dispose of all waste material in compliance with the project’s Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

END OF SECTION

PART 1 – GENERAL

1.01 WORK INCLUDED

A. A grounding system shall be provided for neutral ground and equipment ground as required by Code.

B. An isolated grounding system shall be provided for all isolated ground receptacles as allowed by Code (2020 NEC 250.146(D)).

C. Provide all grounding of other systems as indicated in Divisions 26, 27, and 28.

1.02 BRANCH CIRCUIT GROUNDING CONDUCTORS

A. Portions of this facility are required by NEC 517.11 to be provided with branch circuit ground wires. (Do not provide ground wires in rooms and spaces exempted by NEC 517-30).

PART 2 – PRODUCTS

2.01 GROUNDING CONDUCTORS

A. Copper, code size, with physical protection where subject to damage. Bare or green insulated.

2.02 GROUND RODS

A. 3/4" x 8'-0" copper clad steel.

2.03 ISOLATED GROUND BARS

A. Provide in all panels containing isolated ground circuits.

PART 3 – EXECUTION

3.01 GENERAL

A. Provide all grounding for electrical systems and equipment as required by codes and as specified herein.

3.02 SIZE OF GROUND WIRE

A. Provide ground wire sizing as required by Code. Where ground wire is exposed to physical damage or is used outside of the building, protect with conduit.

3.03 GROUND RODS

A. Provide as shown and/or required. Connect the ground conductor to each rod.

3.04 CONCRETE-ENCASED ELECTRODE

A. Provide in accordance with NEC 2020, Article 250.52(A)(3) and Article 250.68(C)(3).

3.05 GROUND CONNECTION OF WATER PIPING

A. Metal internal piping shall be grounded, as part of this Contract. This includes jumpers for dielectric fittings.

3.06 CONNECTION TO THE GROUND BUS

A. Provide connections in accordance with the codes; including but not limited to conduit system, switchboard frame, service neutral and electrically operated equipment and devices. No device or equipment shall be connected for electrical service which has a neutral conductor connected to a grounding conductor or to the frame within the device or equipment.

3.07 METHOD OF CONNECTION

A. Make all underground ground connections and ground cable splices by thermal welding. Aboveground ground connections and ground cable splices may be by permanent compression connector. Grounding lugs, where provided as standard Manufacturer's items on equipment furnished, may be used.

3.08 FLEXIBLE RACEWAY

A. Shall not be used for grounding. Install separate ground conductor in all flexible raceway.

3.09 PVC RACEWAY

A. Install separate ground conductor in all PVC raceway as required per Code.

3.10 DROP CORDS

A. Shall have a grounding wire and be connected with a grounding type plug and receptacle.

3.11 TESTING REQUIREMENTS

A. Measure the OHMIC value of the Electric Service Entrance metallic "System Ground" with reference to "Earth Ground" using the "Multiple Ground Rod Fall-In-Potential" method and suitable instruments. Maximum resistance to ground shall be less than 25 ohms. If this resistance cannot be obtained with the ground system shown, notify the Architect immediately for further instructions. Provide OHMIC test results to Engineer.

3.12 CLEANING

A. Dispose of all waste material in compliance with the project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

END OF SECTION

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Provide outlet and pull boxes to enclose devices, permit the pulling of conductors, and for wire splices and branches.

1.02 RELATED DOCUMENTS

A. Section 26 00 00 – Electrical General Conditions

PART 2 – PRODUCTS

2.01 INTERIOR WIRING

A. General: Outlet and pull boxes shall be pressed drawn steel, zinc coated with plaster ring where applicable. Welded boxes not allowed. Four-inch size minimum. Large pull boxes shall be fabricated sheet steel, zinc coated or baked enamel finish, with return flange and screw retained cover.

B. Surface Metal Raceway: Boxes of same manufacturer and to match raceway. Boxes to accommodate standard devices and device plate.

C. Concrete and Masonry: Boxes for casting in concrete or mounting in masonry walls shall be the type specifically designed for that purpose.

D. Install pull boxes so as to be accessible after completion of building construction.

E. Ceiling outlet boxes shall be galvanized octagonal 4 inch, 1-1/2-inch-deep (without fixture stud), 2-1/8 inches deep (with fixture stud).

2.02 EXTERIOR WIRING

A. Above Grade: Outlet and junction boxes shall be cast or malleable iron or shall be cast of corrosion resistant alloy compatible with raceway to which it is connected. Pull boxes shall be fabricated of heavy gauge steel and hot dipped galvanized. All boxes shall have gasketed covers.

B. Below Grade: Where exposed to earth, boxes (handholes) shall be constructed of precast concrete with size, configuration, cover, grates and reinforcing as required by the particular installation.

1. Manufacturer: With non-slip lid and similar to Oldcastle utility vault 3030LA with base or Fogtite J11 Type 2 with base. Lid shall be H-20 rated where installed in traffic areas. Where not exposed to earth shall comply with Paragraph 2.02A above.

C. Exterior outlet boxes shall be weather resistant and rain tight, with appropriate covers, gaskets and screws.

PART 3 – EXECUTION

3.01 ANCHORING

A. All boxes shall be firmly anchored directly or with concealed bracing to building studs or joints. Boxes must be so attached so that they will not rock or shift when devices are operated.

3.02 FLUSH MOUNTING

A. Except for surface mounted boxes or boxes above accessible ceilings, all boxes shall have front edge (box or plaster ring) even with the finished surface of the wall or ceiling.

3.03 ELECTRICAL OUTLETS

A. General: Coordinate the work of this section with the work of other sections and trades. Study all Drawings that form a part of this Contract and confer with various trades involved to eliminate conflicts between the work of this section and the work of other trades. Check and verify outlet locations indicated on Architectural Drawings, door swings, installation details, layouts of suspended ceilings and locations of all plumbing, heating and ventilating equipment.

B. Centered on Built-In Work: In the case of doors, cabinets, recessed or similar features, or where outlets are centered between such features, such as between a door jamb and a cabinet, make these outlet locations exact. Relocate any outlets which are located off center.

C. Vertical and Horizontal Relationships: Where more than one outlet is shown or specified to be at the same elevation or one above the other, align them exactly on centerlines horizontally or vertically. Relocate as directed all such outlets (including lighting, receptacle, power signal and thermostat outlets) which are not so installed, at no additional cost to Owner.

D. Device Outlet Height: Measure from the finished floor.

*Switches	4-feet, set vertically, to top of box
*Receptacles, Telecommunications	18-inches, set vertically to centerline
Other	As noted or as directed by Architect

∗ *Heights may vary. See Drawings for additional information*

E. Ceiling Location: For acoustical material locate outlet either at the corner joint or in the center of a panel, whichever is closer to the normal spacing. Locate all outlets in the same room in the same panel location.

F. Installed in Sound Walls: Boxes installed in sound walls shall not be installed back-to-back. All boxes shall be separated by one stud space and shall be interconnected with flex conduit with a 90° loop. Where stud space separation is not possible, utilize sound attenuating mastic around each box. 3M Fire Barrier Moldable Putty Pads MPP+ (2.54 mm minimum) or similar.

3.04 ELECTRICAL WORK IN COUNTERBACKS, MILLWORK AND CASEWORK

A. Provide as shown and/or specified. Provide templates, where required, to other trades for drilling and cutting to ensure accurate location of electrical fixtures (outlets and devices) as verified with the Architect. Provide all wiring, devices, plates and connections required by said fixture.

3.05 CONNECTION TO EQUIPMENT

A. For equipment furnished under this or other Divisions of the Specifications, or by others. Provide outlet boxes of sizes and at locations necessary to serve such equipment. An outlet box is required if the equipment has pigtail wires for external connection, does not have space to accommodate circuit wiring used. Study equipment details to assure proper coordination.

3.06 BLANK COVERS

A. Provide blank covers or plates over all boxes not covered by equipment.

3.07 JUNCTION OR PULL BOXES

A. Pull and junction boxes shall be installed as shown, and to facilitate pulling of wire and to limit the number of bends within Code requirements. Boxes shall be permanently accessible and shall be placed only at locations approved by the Architect.

B. In suspended ceiling spaces, boxes shall be supported from the structure independently from ceiling suspension system.

C. The Drawings do not necessarily show every pull box or junction box required. The Contractor is permitted to provide boxes deemed necessary when installed in accordance with these Specifications.

3.08 ELECTRIC WATER COOLER

A. Conceal the electrical outlet behind the unit housing as provided for by the Manufacturer.

3.09 BOXES CONTAINING MULTIPLE DEVICES

A. Boxes containing emergency and normal devices are permitted only with steel barriers manufactured especially for the purpose of dividing the box into two completely separate compartments.

B. Device boxes containing multiple devices and wiring rated over 150 Volts to ground and over 300 Volts between conductors are permitted only with steel barrier manufactured especially for the purpose of dividing the box into separate compartments for each device having exposed live parts.

3.10 BOXES IN EARTH

A. Provide for all wire splices and as required to pull conductors. Boxes (handholes) shall be set in place on a 3" sand bed. Coverplates shall be flush to, and match the slope of, the final surface grade.

3.11 COLOR CODING

A. All junction boxes installed in accessible spaces and exposed in unfinished areas shall be color coded using spray paint or tape on the box and cover as applicable in the following manner:

277/480-Volt ..... Sand
120/208-Volt ..... Gray
Emergency Power ..... Orange
Fire Alarm ..... Red
Clock & Program ..... Green
Intrusion Alarm ..... Yellow
Telephone ..... Dark Blue
Television ..... Rust

B. The colors shall match the colors used on the raceway - See Section 26 05 33.

3.12 NAMEPLATES

A. For all line voltage junction boxes, provide engraved nameplate indicating circuit numbering of all wiring in junction box.

3.13 CLEANING

A. Dispose of all waste material in compliance with the project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

END OF SECTION

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Provide raceway system complete.

1.02 RELATED DOCUMENTS

A. Section 26 00 00 – Electrical General Conditions

PART 2 – PRODUCTS

2.01 GALVANIZED RIGID STEEL CONDUIT (GRS)

A. General: Hot dipped galvanized.

B. Fittings: Galvanized malleable iron or noncorrosive alloy compatible with galvanized conduit. Erickson couplings, watertight split couplings (OZ Gedney type or equivalent) permitted. Running thread or set screw type fittings not approved.

2.02 INTERMEDIATE METAL CONDUIT (IMC)

A. General: Hot Dipped galvanized.

B. Fittings: Galvanized malleable iron or noncorrosive alloy compatible with galvanized conduit. Erickson couplings, watertight split couplings (OZ Gedney type or equivalent) permitted. Running thread or set screw type fittings not approved.

2.03 ELECTRICAL METALLIC TUBING (EMT)

A. General: Hot dipped galvanized.

B. Fittings: Raintight; steel or malleable iron type using a split corrugated compression ring and tightening nut or stainless steel locking disc. Steel set screw fittings are acceptable for dry locations. Indenter, drive-on and pressure cast or die cast type set screw are not acceptable.

2.04 FLEXIBLE METAL CONDUIT (FMC, LFMC)

A. Dry Locations:

1. General: Galvanized flexible steel for dry locations only.
2. Fittings: Malleable iron or steel, Thomas and Betts "squeeze" type or equal.

B. Damp and Wet Locations:

1. Liquid Tight: Polyvinyl chloride (PVC) weatherproof cover over flexible steel conduit.
2. Fittings: Thomas and Betts "liquid tight" or equal.

2.05 SURFACE METAL RACEWAY

A. Formed steel or aluminum type. Standard factory finish. Where color choice is available, consult Architect/Engineer for selection prior to ordering.

2.06 RIGID NON-METALLIC CONDUIT (PVC)

A. Schedule 40 rigid polyvinyl chloride type unless otherwise noted.

PART 3 – EXECUTION

3.01 GENERAL

A. Install Raceway concealed in construction unless noted otherwise on the Drawings or specifically approved in writing by the Architect/Engineer.

B. Cut Raceway ends square, ream and extend maximum distance into all couplings and connectors.

C. Provide and install manufactured end caps on all Raceway ends during construction to prevent the entrance of water or dirt. Tape, as a cover, not permitted.

D. Swab out all Raceways before pulling wires.

E. All elbows for GRS and PVC Raceway shall be factory radius bends. For all other Raceway, use factory radius bends of 1-1/4" and larger diameter.

F. Raceway shall not penetrate sheet metal ducts unless permission is granted by Architect/Engineer. All sleeves shall be provided for Raceway installation.

G. Provide (2) 3/4" conduit stubs into accessible ceiling space from all recessed panelboards or systems terminal boxes.

3.02 GALVANIZED RIGID STEEL CONDUIT

A. All Connections shall be watertight. Install for all raceways in concrete or where subject to damage.

3.03 INTERMEDIATE METAL CONDUIT

A. Intermediate metal conduit is permitted as a substitute for galvanized rigid steel conduit except where GRS is required by Code.

3.04 ELECTRICAL METALLIC TUBING

A. Install for wiring in masonry, frame construction, furred ceilings and above suspended ceilings. May be used for exposed work in unfinished areas where not subject to damage. Where construction involves masonry work, surface cut masonry units wherever such masonry units are to remain unplastered or uncovered in complete construction.

3.05 RACEWAYS UNDERGROUND

A. Galvanized rigid steel conduit - painted with two coats of bitumastic paint - or galvanized rigid steel conduit with 15 mil. polyvinyl chloride (PVC) jacket (repair abrasions with PVC base paint or PVC).

B. PVC raceways may be used for underground runs when permitted by Code. Field bends, when necessary, shall be formed only with factory recommended heater. Penetrations through floor and walls shall be galvanized rigid steel (GRS) conduit. PVC, if used, shall be increased in size from that shown to include Code required ground wire.

C. All underground bends in excess of 10° and all elbows shall be GRS.

D. Arrange and slope raceways entering building to drain away from building.

E. Ground wires shall be provided in all PVC raceway.

3.06 INSERTS, SHIELDS AND SLEEVES

A. Furnish and set in place, in advance of pouring slabs and walls, all inserts and sleeves needed to execute Division 26 equipment installation.

B. Where supports in slabs are required after wall has been poured, use a drilled-in threaded insert, installed as recommended by Manufacturer.

C. Sleeves shall be provided for all wall penetrations.

3.07 RACEWAYS THAT STUB UP THROUGH FLOOR

A. Install at such depth that the exposed raceway is vertical and no curved section of the elbow is visible.

B. PVC raceway shall not be stubbed through floors.

3.08 SEALING OF RACEWAY PENETRATIONS

A. Exterior Wall Surfaces Above Grade: Seal around all penetrations with caulking approved by Engineer. For concrete construction above ground level, cast Raceway in wall or core drill wall and hard pack with a mixture of equal parts of sand and cement.

B. Exterior Surfaces Below Grade: Cast raceway into wall (or floor) or use manufactured seal assembly (such as OZ Gedney type "FSK") cast in place.

C. Roofs: Provide mopped, lead, roof jack where raceway penetrates roof membrane.

D. Fire Rated Floors, Walls, Ceiling/Roofs: Concrete or masonry, seal around raceway penetration with Dow Corning 3-6548 silicone RTV foam or approved equal. Plaster or gypsum wallboard, seal around raceway penetration with plaster, fire tape per local Fire Marshal's requirements.

3.09 SEALING OF RACEWAYS

A. Seal interior of all raceways which pass through buildings roofs, floors or through outside walls of the building, above or below grade. Seal on the end inside the building using duct sealing mastic, non-hardening compound type, specially designed for such service to maintain the integrity of the seal of the wall, floor or roof. Pack around the wires in the Raceways.

3.10 HANGERS FOR RACEWAYS

A. In suspended ceiling spaces the Contractor may, at their option, attach 1/2" or 3/4" EMT raceways to the ceiling suspension system where such system is structurally suitable on independent wire secured at both ends; in which case, provide clips manufactured for the purpose.

B. When more than two raceways will use the same routing, group together on a patented channel support system (such as Unistrut).

3.11 SURFACE METAL RACEWAY

A. Install parallel to building surface (i.e., wall, ceiling, floor). Fasten to surface as recommended by Manufacturer. Mount so raceway is in the least obvious location. Shall be used in lieu of conduit in finished areas.

3.12 FLEXIBLE CONDUIT

A. Flexible conduit shall be used only for connection to motors and equipment subject to vibration with 90° loop minimum to allow for isolation and for lay-in lighting fixtures above T-Bar ceilings. For fixture installations, one end of flex must terminate in rough-in junction box. Flex conduit shall not be installed over 6' long or used to connect from fixture to fixture. Use liquid tight for pumps, equipment which is regularly washed down, and equipment in damp locations. Provide ground wire.

3.13 COLOR CODING

A. General: Provide color bands of tape or paint one inch (25 mm) wide for raceways up to two inches (51 mm) in diameter and one-half the raceway diameter for larger raceways, applied at panel and pullbox locations within each room, and 50 ft. (15.25 m) on centers within an area.

B. Color Banding:

120/208 Volt	Gray
277/480 Volt	Sand
Clock and Program	Green
Emergency Power	Orange
Fire Alarm	Red
Intrusion Alarm	Yellow
Low Voltage Switching	Black
Telephone	Dark Blue
Television	Rust

C. The colors shall match the colors used on the boxes - See Section 26 05 32.

3.14 PULL CORDS

A. Nylon type shall be included in all installed empty raceway.

3.15 CLEANING

A. Dispose of all waste material in compliance with the project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

END OF SECTION

SECTION 31 11 00
CLEARING AND GRUBBING

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes:
   1. Location of existing utilities.
   2. Protection of existing vegetation and utilities not scheduled for removal.
   3. Clearing and grubbing of stumps, vegetation, debris, rubbish, and site improvements, and stripping of organic material.
   4. Protection of adjacent property, structures, benchmarks, and monuments.
   5. Removal and legal disposal off site of material resulting from these operations.

B. Related Sections:
   1. Section 31 20 00 Earth Moving
   2. Section 31 25 00 Erosion and Sedimentation Control
   3. Section 01 35 63 sustainability Certification Project Requirements

1.2 REFERENCES

A. Reference the following standards:
   1. The current WSDOT Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT).
   2. Geotechnical Engineering Report completed by Landau Associates.
   3. Technical Memorandum – Results of Onsite Soils Testing for Tacoma Plume Arsenic and Lead
   4. Washington Department of Ecology – Tacoma Smelter Plume Model Remedies Guidance

1.3 QUALITY ASSURANCE

A. A pre-installation meeting shall be held with the Owner prior to work related to this section.

1.4 SUBMITTALS

A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, site improvements, pavements, curbs and utilities that might be misconstrued as damage caused by site clearing.

1.5 EXISTING CONDITIONS

A. Coordinate with utility companies and verify that all appropriate services have been disconnected. Contractor shall pay all fees and costs associated with utility disconnects, capping, line and meter removals.
B. Do not shut off or cap utilities without prior notice. Site utilities shall remain in service unless otherwise indicated. Coordinate work with Division 1 requirements.
C. Construct temporary erosion and sedimentation control and maintain as required.
D. Maintain storm facilities street drains and sewers open for free drainage.
E. Objectionable Noises: Conform with agency requirements regarding Noise Control.
F. Maintain vehicular and pedestrian traffic routes:
   1. Ensure minimum interference with roads, streets, alleys, sidewalks, owners business operations and adjacent facilities.

2. Do not close or obstruct streets, fire lanes, sidewalks, alleys or passageways without permission from authorities having jurisdiction and owner.
3. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.

G. Contractor is responsible for the verification of all utility locations. A minimum of five working days in advance of construction, use a private utility locate service to verify location and elevation of existing utilities within the areas shown on the plans to allow for coordination and mitigation of conflicts without down time.

1.6 DIMENSION AND LAYOUTS

A. Comply with all applicable Federal, State and Local codes and safety regulations. If there are any conflicts among referenced standards, the more stringent requirements shall govern.
B. Obtain necessary permits, including but not limited to:
1. All permits required due to Contractor's Method of Operation.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Obtain required permits and permission from local governing authorities and Owner prior to commencing work.
B. Verify that site improvement removal may safely and appropriately begin.

3.2 EROSION CONTROL

A. Refer to Erosion Control Plan and Section 31 25 00.
B. Install and maintain TESC measures in accordance with the project documents.
C. LEED: Refer to Section 01 35 63 Sustainability Certification Project Requirements for additional information relating to execution of the following LEED credits:
1. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls

3.3 CLEARING

A. All trees, brush, logs, upturned stumps, roots of downed trees, rubbish and debris shall be removed and disposed of. Clear all areas to permit installation of new construction.
B. Do no clearing within those areas specified to remain undisturbed.

3.4 GRUBBING

A. Grub all areas to be graded, except as noted below.
B. Do no grubbing within areas that the Architect/Engineer and/or Drawings specify to remain undisturbed.
C. Grubbing shall be to the depth necessary to remove all stumps, large roots, buried logs and other objectionable material.

3.5 STRIPPING

A. Strip all areas to be graded, except as noted below.
1. Topsoils within the top 6 inches of existing grade are expected to have increase levels of Arsenic. See the Technical Memorandum for documented arsenic levels and locations. The upper 6" of topsoil shall be handled in accordance with the cleanup requirements of

the Technical Memorandum and Washington State Department of Ecology – Tacoma Smelter Plum Model Remedies Guidance.

2. Contractor shall take appropriate measures to prevent contaminated dust from leaving the site as noted in the Technical Memorandum and Washington State Department of Ecology – Tacoma Smelter Plum Model Remedies Guidance.
3. Contractor shall take appropriate measures to protect workers as noted in the Technical Memorandum and Washington State Department of Ecology – Tacoma Smelter Plum Model Remedies Guidance.

B. Remove all sod, grass and landscape materials before stripping topsoil. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials. See referenced geotechnical report for recommendations for stripping depth.

3.6 SITE IMPROVEMENT REMOVALS

A. Adjacent improvements and natural conditions to remain that are damaged by the Contractor during the work shall be replaced and restored in kind at no additional cost to the Owner.
B. Sprinkle excavated material and access roads with water as necessary to limit dust to the lowest practicable level. Do not use water to such an extent as to cause flooding, contaminated runoff, or icing.
C. All utility piping and structures not designated for removal are to remain until new services are tested and in operation and shall be protected during construction unless indicated otherwise. Damage to existing utilities, which are to remain, shall be repaired immediately at the Contractor's expense.
D. In the event the Contractor encounters utility lines not shown on the project documents or otherwise indicated to be saved, removed, or abandoned, the location of such lines shall be marked in the field and the Owner notified immediately.
E. Sawcut, remove, recycle and dispose of slabs, pavement and other obstructions in areas to be improved or as required to construct new improvements. Materials not designated for reuse shall be broken up, loaded, and legally disposed of or legally recycled by the Contractor. Care shall be taken removing items in place. All concrete walk removals shall be sawcut at the next adjacent joint. Adjacent materials designated to remain that are damaged by the Contractor during the work shall be replaced in kind at no additional cost to the Owner.
F. If identified, remove and dispose of existing septic facilities as identified on the plans in accordance with Department of Health and all governing agency requirements and regulations

3.7 DRAINAGE AND FILL

A. Keep natural drainage ways open for drainage at all times. Provide erosion control facilities as required according to the plan to prevent sediment transport either downstream, to onsite stormwater management facilities or offsite. At no time shall more than one foot of sediment be allowed to accumulate within a ditch or swale. At no time shall sediment be allowed to accumulate within a catch basin that is a height of 60% of the sump or within 6 inches of the outlet pipe, whichever is greater. All catch basins and conveyance ditches shall be cleaned after paving and final site stabilization. Mud/sediment build-up shall be removed, and the cleaning operation shall not flush sediment-laden water into the onsite or downstream system.
B. Fill open pits, excavations and holes caused by the work with imported structural fill, unless further excavation or earthwork is indicated. Fill shall be placed and compacted per the requirements of Section 31 20 00 Earthmoving. Open pits, excavations and holes shall be kept free of standing water.

3.8 UTILITY SYSTEMS

A. Locate, identify, disconnect, and remove, seal or cap off utilities as indicated on the plans.
B. Arrange to shut off indicated utilities with utility companies, owner and/or affected parties.

C. Do not interrupt utilities serving facilities occupied by Owner or others unless permitted by the Owner and then only after arranging to provide temporary utility services.
D. Remove and dispose of existing structures and pipes as indicated on plan. Plug or cap all pipes to remain unless designated otherwise on plans.
E. Abandonment of existing catch basins, inlets and other utility structures: Two-feet below finished grade.
F. Cap or plug pipes shall be in accordance with Section 7-08 of the WSDOT Standard Specifications.

3.9 DISPOSAL OF MATERIALS

A. Remove the refuse from site preparation, including trash and debris, and legally dispose of it off Owner's property at no additional cost to the Owner. Refuse shall either be recycled or disposed of in a manner consistent with all government regulations. In no case shall refuse material be left on the project site, shoved onto abutting private properties, or be buried in embankments or trenches on the project site. Maintain hauling routes clean and free of any debris resulting from work of this Section.
B. Existing topsoils within the upper 6 inches not being mixed and reused onsite shall be disposed of at landfill for permitted for arsenic levels between 20-40 ppm. Contractor shall determine volume. All testing and disposal costs shall be included in the contractor's costs.

END OF SECTION 31 11 00

SECTION 31 20 00
EARTH MOVING

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes:
   1. Accomplishing indicated and required stripping, excavation, filling, compaction, sub-grade preparation, rough and finish grading, and the like.
   2. Excavate and backfill trenches as necessary for water, storm drain, foundation drain, sanitary sewer installation and other work as shown on drawings.
   3. Removing materials from the site which are either
      a. unsuitable for use, or;
      b. are in excess of that required.
   4. Importing additional required materials.
   5. Coordinating earthwork operations with other work of the project.
   6. Dewatering requirements including providing, operating, maintaining and removing temporary dewatering systems for controlling surface water in the construction area.
   7. Preparing subgrades for slabs-on-grade, walks, pavements, turf and grasses, and plants.
   8. Excavating and backfilling for buildings and structures.
   9. Drainage course for concrete slabs-on-grade.
   10. Subbase course for concrete walks and pavements.
   11. Subbase course and base course for asphalt paving.
   12. Excavating and backfilling for utility trenches.

B. Related Sections:
   1. Section 31 11 00 Clearing and Grubbing
   2. Section 31 25 00 Erosion and Sedimentation Control
   3. Section 33 10 00 Water Utilities
   4. Section 33 31 13 Sanitary Utility Sewerage Piping
   5. Section 33 40 00 Storm Drainage Utilities
   6. Section 01 35 63 sustainability Certification Project Requirements

1.2 REFERENCES

A. Reference the following standards:
   1. The current WSDOT Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT).
   2. ASTM D-1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
   3. Uniform Federal Accessibility Standards (UFAS).
   4. Geotechnical Engineering Report by Landau Associates.

1.3 DEFINITIONS

A. Backfill: Soil material used to fill an excavation.
   1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
   2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting a slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
   1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Contracting Office Representative. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
   2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Contracting Office Representative. Unauthorized excavation, as well as remedial work directed by Contracting Office Representative, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Pothole: exploratory excavation to uncover buried utility, structure, or other feature to determine exact location, elevation, size, and type of material.

I. Site Improvements: Any manmade object, including portions on, over, and below surface of ground

J. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

K. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

L. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

M. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

N. Unsuitable Material: Soil, organics, waste, or other material not complying with these specifications, not capable of supporting foundations or structures, or not capable of compaction to specified density.

1.4 QUALITY ASSURANCE

A. A pre-installation meeting shall be held with the Owner prior to work related to this section.

B. Regulatory Requirements:
   1. See referenced Codes, ordinances and the like.
   2. Obtain all permits.

C. A qualified Soils Engineer and/or materials testing lab shall be employed by the Owner to perform all required tests of fill and of soil compaction, and for supervision of the earthwork. Contractor shall notify the Soils Engineer prior to completion of each lift and phase of the work in order to permit him to make tests as required. Samples of all fill materials proposed for use shall be delivered to him at least five days prior to the time that such materials are expected to be placed in the work. No materials shall be placed until receipt of written approval of samples and all materials used shall be the same as those in the samples submitted. The Soils Engineer shall be considered the Architect's/Owner's representative on the job during earthwork operations. Any fill which in his opinion does not meet the specification requirements shall be removed or otherwise corrected as he directs.

D. Conform to requirements of the Geotechnical Report referenced in these specifications.

1.5 SUBMITTALS

A. Submit samples of all imported materials to be used seven days in advance of use. Samples shall consist of sieve analysis of material gradation.

1.6 PROJECT CONDITIONS

A. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth moving operations.
B. Do not commence earth moving operations until Erosion and Sedimentation Control measures are in place as specified in the plans and as specified in Section 31 25 00.

1.7 DIMENSION AND LAYOUTS

A. Comply with all applicable Federal, State and Local codes and safety regulations. If there are any conflicts among referenced standards, the more stringent requirements shall govern.
B. Obtain necessary permits, including but not limited to:
   1. All permits required due to Contractor's Method of Operation.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Soil Materials:
   1. Topsoil: Reusable excavated or imported, friable loam; free of subsoil, roots, grass, excessive amount of weeds, large stone, and foreign matter.
   2. Subsoil: Imported or excavated materials, graded free of lumps larger than 6 inches, rocks larger than 3 inches, and debris.
B. Earth Fill Materials: Furnish the following materials for fills and backfills where indicated or where specified.
   1. Imported Structural Fill: Structural fill shall consist of a granular soil free of organics, debris, or other deleterious material. Conform to "Gravel Borrow" in accordance with Section 9-03.14(1) of the WSDOT Standard Specification with gradation.
   2. Crushed Surfacing: Conform to "Crushed Surfacing Base Course" in accordance with Section 9-03.9(3) of the WSDOT Standard Specification with gradation. To be used as base for pavements and beneath shallow foundations.
   3. Capillary Break Material: Conform to "Aggregates for Gravel Base" in accordance with Section 9-03.10 of the WSDOT Standard Specification with gradation and 100% passing the 1-inch sieve and no greater than 5% passing No. 200 sieve. To be used beneath slab on-grade.
   4. Gravel Backfill for Pipe Bedding: Conform to "Gravel Backfill for Pipe Zone Bedding" in accordance with Section 9-03.12(3) of the WSDOT Standard Specification with gradation.
   5. Excavated materials for use as fill: Onsite soils are acceptable for reuse as structural fill. The suitability of excavated site soils for compacted backfill will depend on gradation and moisture content of soil when placed. Excavated materials shall meet the following requirements:
      a. be tested and approved for use.
      b. be free from organic and deleterious matter.
      c. be maintained at moisture content suitable for compaction.
      d. no silty soils permitted.
      e. no demolition debris permitted
      f. Soil shall contain not more than 5% fines passing a No. 200 sieve.
      g. Compacted to 95 percent of maximum dry density (MDD) using ASTM test method D1557.
C. Stockpile site material to be used as fill material where permitted by Owner.
D. Stockpile any topsoil material to be reused where agreed upon.
E. Fill Under Sidewalks: Conform to Imported Structural Fill and Crushed Surfacing.
F. Concrete: Lean concrete or control density fill (CDF) shall be utilized as structural fill when required by unsuitable soil conditions or when site constraints prohibit regular compaction

methods. Conform to "CDF" in accordance with Section 2-09.3(1)E of the WSDOT Standard Specification.

2.2 DEWATERING

A. Dewatering includes lowering the water table for the purposes of reducing seepage which would otherwise emerge from the slopes or bottom of the excavation, increasing the stability of excavated slopes, preventing loss of material from beneath the slopes or bottom of the excavation, reducing hydrostatic heads and seepage forces, and preventing rupture or heaving of the bottom of an excavation. Provide necessary pipe, pumps, and filter material suitable for conditions of construction.
B. Disposal of dewatering water shall be to an approved location and water shall be free of silts and fines. Settlement of dewatering water may be required prior to disposal. Contractor to provide water disposal plan to Architect prior to commencing with dewatering.

PART 3 - EXECUTION

3.1 PREPARATION

A. Field Measurements: Locate and carefully maintain all benchmarks, monuments, control markers and other reference points; if disturbed or destroyed, replace as directed at no cost to Owner.
B. Permits and Inspections: Obtain all permits and required inspections; pay all fees. Maintain property in as good condition as possible. At completion, leave in as good condition as before work started.
C. Protection:
    1. Utilities
        a. The Contractor shall protect from damage private and public utilities. Contractor shall, before excavation begins, call the Utilities Underground Location Center 1-800-424-5555. Contractor shall pay all costs associated with location of existing utilities; including costs for private locate service to determine connection points and crossings.
        b. Notify owners of underground facilities at least two full business days prior to commencing any excavation. Provide schedule of excavation to all owners of underground facilities in accordance with RCW 19.122.
        c. The Contractor shall, at its own expense, make excavations and borings ahead of the work, as necessary, to determine the exact location of utilities, service stubs, and underground structures.
        d. All existing utilities to remain shall be protected and maintained by the Contractor and shall not be disturbed, disconnected or damaged during work. The Contractor shall be responsible for all expenses arising from damaged utilities/structures except for unforeseen underground items.
    2. Site Improvements
        a. The Contractor shall protect from damage all pavement, curbs, sidewalks, paved areas, and other improvements to remain.
        b. Contractor shall be responsible for replacement if damage occurs to improvements to remain.
    3. Access: Contractor shall provide full access to adjacent driveways, fire hydrants, street crossings, sidewalks, and other points as designated by the Owner.

3.2 EROSION CONTROL

A. Refer to Erosion Control Plan and Section 31 25 00.
B. Install and maintain TESC measures in accordance with the project documents.
C. LEED: Refer to Section 01 35 63 Sustainability Certification Project Requirements for additional information relating to execution of the following LEED credits:

1. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls

3.3 SITE GRADING

A. General: Required contours and elevations are indicated and noted on Drawings; should indicated figures conflict with actual conditions, notify Owner and await his directions before proceeding.
B. Grading:
   1. Shape surface of site to grades and contours as noted (as applicable).
   2. Strip topsoil in areas to be graded and those to be excavated and stockpile on site where directed and remove excess subsoil and topsoil not being reused from site. See additional requirements for topsoils containing arsenic in Section 31 11 00
   3. Remove debris and rocks, which will interfere with reusable topsoil and lawn maintenance.
   4. Control grading around building areas and building excavations at all times to prevent flow of water into excavated areas.
   5. At paving and other site improvements, shape subgrades to lines, grades, and cross sections indicated; remove and replace soft or otherwise unsatisfactory material; excavate rock encountered to a depth of 6” below finish subgrade elevations; bring low areas up to required elevations with suitable structural fill materials.

3.4 APPROVAL OF SUBGRADE

A. Notify the Owner when excavations have reached required subgrade.
B. Subgrade shall be prepared per WSDOT Standard Specification 2-06.
C. When the Owner determines that unforeseen unsatisfactory soil is present, continue excavation and replace with compacted foundation material as directed.
D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by the Owner at no cost to the Owner.

3.5 EXCAVATION

A. General: Do all excavation work for building and other work shown on the drawings, to lines and elevations required for the work.
B. Removal of Obstructions: Remove rocks, boulders, and other obstructions.
C. Depth of Excavation:
   1. Ground Slab: Excavate to subgrade required to provide for a 6 inch minimum depth of permanent drainage material and vapor barrier as detailed on the drawings. See structural drawings and specifications for variations.
   2. Footing/Foundation Excavation: Excavate to depths indicated on the drawings.
   3. Slope banks to angle of repose or less, until shored.
   4. Excavation shall not undermine any foundation.
D. Excess Excavation: If through error, excavation is to levels lower than shown, and is in compacted fill, re-compact to required compaction percentages at Contractor’s expense. Where excess excavation is in undisturbed soil, fill with lean concrete or deepen footing, at Contractor’s expense.
E. Do not excavate wet topsoil or subsoil. Do not excavate wet topsoil or subsoil without approval of General Contractor and Owner. Coordinate all wet conditions work stoppages beforehand with general contractor and Owner.
F. Dewatering Excavation: Maintain excavation in dry condition as required, free from frost.
G. Trench Excavations:
   1. Excavate trenches to depths required and widths as necessary; make sides as nearly vertical as practicable. Brace and shore per governing agency requirements. Grade and smooth trench bottoms for uniform support of utility lines. Excavate to depths allowing for bedding.

2. Excavation Near Mature Trees: Preserve and protect existing trees at the site which are designated to remain and those adjacent to the site. Any fines levied by the Owner for tree damage or destruction shall be the responsibility of the Contractor.

H. Catch basins, manholes, inlets, and similar utility structures: Excavate to furnish a minimum of 12 inches between sides of excavation and outer surfaces of structure. Take care to excavate to exact depths required; fill over excavation with compacted gravel borrow. If the material at the bottom of excavations becomes unstable or muddy due to weather conditions, the Contractor shall excavate all unsuitable material below grade and replace the unstable material with gravel borrow.

I. Excavation Safety Systems
1. Provide all trench excavation in excess of 4 feet in depth with a safety system conforming to the applicable standards and requirements.
2. All excavation not requiring trench safety systems shall also meet the WISHA safety standards.

J. Utility Trench Excavation
1. Trenching shall include all excavation of every description and of whatever materials encountered to the depth indicated on the Drawings or in the Project Manual.
2. Grade and smooth bottoms of trenches to furnish uniform bearing and support for utility lines; remove rocks and similar material causing point bearings.
3. Form bell holes and depressions for joints after grading of bottom limit such depressions to lengths, depths, and widths required for particular type of joint.
4. Excavate to depths allowing for bedding.

3.6 FILLING AND BACKFILLING

A. General: Fill to elevations or grades indicated or required. Remove debris and decayable matter from all areas before filling. Protect shored walls from damage during filling operations. Verify foundation walls are braced to support surcharge forces imposed by placed fill materials near optimum (+/- 2%) moisture content to permit compaction to specified density. Fill over excavated areas under structure bearing surfaces in accordance with geotechnical report. All backfill shall meet the requirements of Structural Fill Materials in the geotechnical report.
1. Backfill areas to contours and elevations as shown on plans and in accordance with the Geotechnical Engineering Report. Use unfrozen and unsaturated materials.
2. Backfill systematically, as early as possible, to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
3. Place and compact fill materials in continuous layers not exceeding WSDOT Standard Specifications requirements.
4. Employ a placement method so not to disturb or damage foundations, foundation perimeter drainage, foundation damp-proofing, foundation waterproofing and protective cover, or utilities in trenches.
5. Maintain optimum moisture content of backfill materials to attain required compaction density. Certification of proper placement shall be provided by Soils Engineer.
6. Backfill against supported foundation walls. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.
7. Slope grade away from building minimum of 2%, unless noted otherwise.

B. Backfill: Place fills and backfills in lifts, before compaction, not to exceed 6 inches for hand operated mechanical compactors and not to exceed 12 inches for heavy equipment compactors. Place fill and backfill as soon as practicable to allow time for thorough settlement at time of completion of the Work.
1. Under Interior Concrete Slabs: Provide 6 inch minimum layer of free draining material and leave ready for compaction and installation of vapor barrier. See structural plans and specifications for variations.
2. Bedding for Utility Lines: Properly place material in trenches. Do not disturb sides of trenches. Place and compact and shape material to conform to the barrel of the pipe to ensure continuous firm bedding for full length of pipe. Backfill trenches in lifts as specified above.

3. Topsoil: Distribute evenly around site as required.

C. Bedding and Backfilling for Utility Lines

1. Bedding shall provide uniform support along the entire pipe barrel, without load concentration at joint collars or bells. No blocking of any kind shall be used to adjust the pipe to grade except when used with embedment concrete.
2. Bell holes shall be excavated as required to ensure uniform support along the pipe barrel. Bedding disturbed by pipe movement or by removal of shoring or movement of a trench shield or box shall be reconsolidated prior to backfill. Special care shall be taken to provide adequate bedding support at wye or tee connections and adjacent to manholes or other Structures, so as to avoid bending or shearing stresses at these critical points.
3. In backfilling the trench, the Contractor shall take all necessary precautions to protect the pipe from any damage or shifting. The Contractor shall backfill from the side of the trench to a uniform depth of 2 feet above the crown of the pipe before starting compaction.
4. During all phases of the backfilling operations and testing as outlined herein, the Contractor shall protect the pipe installation, provide for the maintenance of traffic as may be necessary, and provide for the safety of property and pedestrians.
5. Pipe trenches shall be backfilled as soon as possible after the pipe installation. Backfilling of trenches in the vicinity of catch basins, manholes, or other appurtenances will not be permitted until the cement in the masonry has become thoroughly hardened. Walking on the pipe shall not be allowed until at least 1 foot of earth has been placed upon it.
6. Trench backfill shall be spread in layers and be compacted by mechanical tampers of the impact type approved by the Owner's Soils Engineer. The backfill Material shall be placed in successive layers with the first layer not to exceed 2 feet above the pipe, and the following layers not exceeding 12 inches in loose thickness, with each layer being compacted to the density specified herein. Backfill shall also be in accordance with the pipe manufacturer's recommendations.
7. If the required compaction density has not been obtained, the Contractor shall remove the backfill from the trench and recompact using heavier compaction Equipment or more passes. This process shall be repeated until the Contractor has established a procedure that provides the required field density. The Contractor will then be permitted to proceed with backfilling and compacting the remainder of the pipeline under the approved compaction procedure. In the event routine field densities taken during the course of construction show the specified compaction is not being obtained because of changes in soil types or for any other reason as determined by the Owner's Soils Engineer, the Contractor will be required to reestablish the compaction procedure. In no case will excavation and pipe installation operations be allowed to proceed until the specified compaction is attained. Water setting will not be allowed as a method for compaction of backfill. Backfill shall also be in accordance with the pipe manufacturer's recommendations.
8. All bedding and trench backfill of utility lines in the County Right-of-Way shall be in accordance with the WSDOT and County Standards.

D. Embankment Construction:

1. The Contractor shall place earth embankments in horizontal layers of uniform thickness. These layers shall run full width from the top to the bottom of the embankment. Slopes shall be compacted to the required density as part of embankment compaction.
2. During grading operations, the Contractor shall shape the surfaces of embankments and excavations to uniform cross-sections and eliminate all ruts and low places that could hold water.
3. Embankments shall be constructed in accordance with the requirements for fill placement in the Geotechnical Report.

3.7 COMPACTION

A. General: Place fills in uniform lifts, depending on equipment used for compaction, see paragraph 3.5 B, this Section. Compact with approved vibratory compactors, or other approved rollers, or equipment necessary to obtain specified density.
B. Compact areas in accordance with Section 2-03.3(14)D of the 2018 WSDOT Standard Specifications.
C. Moisture Content of Fill Material: Material shall be at near optimum moisture content (within +/- 2%) when compacted. Take appropriate means to obtain moisture content.
D. Areas designated for stormwater infiltration shall not be compacted to preserve infiltrative capability of soils.

3.8 EXCESS OR SHORTAGE OF EARTH MATERIALS

A. Remove all excavated material, except as required for fill onsite, at Contractor's expense. Legally dispose of off site. Keep streets and undisturbed areas of property free from spillage of excavated material and debris by power sweepers or other approved methods.
B. Stockpile excavated materials classified as satisfactory soil material where directed, until required for on-site fill. Place, grade and shape stockpiles for proper drainage and then cover to prevent water infiltration.
C. If shortage, provide suitable materials as needed to complete work.

3.9 FINISH GRADING

A. Finish grade to +/-0.10 foot.
B. Finish grades flush with adjacent surface unless otherwise indicated.
   1. Finish grades will be inspected and approved by Architect and Engineer.
   2. Place topsoil in areas where seeding, sodding and planting is scheduled.
   3. Fine grade topsoil eliminating rough or low areas. Maintain levels, profiles, and contours of sub-grade.
   4. Remove large stones, roots, grass, weeds, debris, and foreign material while spreading.
   5. Roll placed topsoil.
   6. Leave stockpile area and site clean and raked, ready to receive landscaping.
C. Protect and maintain finished surfaces. Allow no heavy objects, to be moved over finish grade surfaces. At no cost to Owner, repair any ruts or holes in finished surfaces, and any obstructions to positive drainage. Repair areas showing settlement.

3.10 FIELD QUALITY CONTROL

A. Conduct inspections to verify conformance with Specifications and Drawings.
B. Provide equipment to roll compact site areas as advised by the project geotechnical, soils or field engineer. Roll compact such areas as requested by the Owner.

3.11 PROTECTION
A. Protecting Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or lose compaction due to subsequent construction operations or weather conditions. Scarify or remove and replace material to depth directed by the Owner; reshape and re-compact at optimum moisture content to the required density.
C. Settling: Where settling occurs during the project correction period, remove finished surfacing, backfill with additional approved material, compact, and reconstruct surfacing. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible at no additional cost to the Owner.

3.12 PROTECTION FROM WEATHER

A. The Contractor shall protect excavated sub-grade, stockpiled soils and excavations from damage due to weather, surface runoff or other source of water that may render the soil unworkable or unusable for filling and compaction on the site.

B. The Contractor shall furnish, install, maintain, replace, operate and remove any and all facilities necessary to keep excavations, stockpiled materials, exposed sub-grades and surrounding working surfaces free from water, surface runoff, mud or deterioration during construction.

1. The Contractor shall provide plastic sheeting, tarpaulins, rock armoring and protection, or other methods to protect exposed sub-grades and stockpiled material from deterioration or damage from water or construction traffic.
2. The Contractor shall dewater all excavations and dispose of the water so as not to cause injury to public or private property, or to cause a nuisance or menace to the public. The Contractor shall at all times have on hand sufficient pumping equipment and machinery in good working condition for all emergencies, including power outage and flooding, and shall have available at all times competent workers for the continuous and successful operation of the dewatering systems. Systems shall be operated so as to accomplish dewatering as necessary to perform and protect the work.
3. It is understood that the Contractor shall, throughout the course of construction which will be occurring during normally wet weather conditions, adequately protect, stabilize or armor all site areas. The Contractor agrees that the measures required to work in wet weather conditions are usual and ordinary, and are reflected in the bid and plan of operation. It is understood that additional compensation will not be granted to the Contractor for impacts due to construction in typical wet weather conditions.

3.13 CLEANING

A. Cleaning: Leave premises clean and free of residue of work of this Section.

END OF SECTION 31 20 00

SECTION 31 23 35
EXCAVATING, BACKFILLING, AND COMPACTING FOR UTILITIES AND STRUCTURES

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Excavating, backfilling, and compacting for utilities, including pipe, structures, and appurtenances.
   2. Control of water in trenches.
   3. Foundation stabilization for pipe and utility structures.
   4. Pipe bedding for pipe and utility structures.

B. Related Sections
   1. Section 01 57 13 – Temporary Erosion and Sedimentation Control
   2. Section 33 11 00 – Water Utilities
   3. Section 33 30 00 – Sanitary Sewerage Utilities
   4. Section 33 40 00 – Storm Drainage Utilities
   5. Section 01 35 63 sustainability Certification Project Requirements

1.2 REFERENCES

A. The current WSDOT Standard Specifications for Road, Bridge and Municipal Construction (WSDOT)
B. City of Lacey Development Guidelines and Public Works Standards
C. Geotechnical Engineering Report completed by Landau Associates
D. ASTM D-422 - Method for Particle Size Analysis of Soils.
E. ANSI/ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-pound Rammer and 18-inch Drop.
F. ASTM C94-86 - Ready-Mixed Concrete.
G. AASHTO T176 - Plastic Fines in Graded Aggregates and Soils by use of the Sand Equivalent Test.
H. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods - (Shallow Depth).
I. ASTM D3017 - Test Methods for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

1.3 DEFINITIONS

A. Unsuitable Material: Section 31 20 00.

1.4 SUBMITTALS

A. General: Comply with Project documents and plans
B. Samples: Submit minimum 50-pound sample for each material four business days prior to placing material.
C. Quality Assurance/Control Submittals:
   1. Test Reports: Sieve analysis for each material.
   2. Certificates: WSDOT pit certification for each pit.

1.5 QUALITY ASSURANCE

A. Qualifications:
   1. Surveyor: Land surveyor licensed in state of Washington with experience on similar projects.

2. Construction Crew Foreman: Minimum six years' working experience and four years' experience as foreman performing similar work.

1.6 REGULATORY REQUIREMENTS

A. Work and material shall be in accordance with current WSDOT Standard Specifications for Road, Bridge and Municipal Construction (WSDOT).

PART 2 - PRODUCTS

2.1 AGGREGATE MATERIALS

A. Bedding Material for Pipe: WSDOT Standard Specifications Section 9-03.12(3), Gravel Backfill for Pipe Zone Bedding. 100 percent passing 1 inch.
B. Foundation Material: WSDOT Standard Specifications Section 9-03.17, Class A.
C. Structural Fill: Section 31 20 00.
D. Bank Run Gravel: WSDOT Standard Specifications Section 9-03.19, Bank Run Gravel for Trench Backfill.
E. Control Density Fill (CDF): Section 31 20 00.

2.2 SOURCE QUALITY CONTROL

A. Tests and Inspection: Provide sieve analysis in accordance with ASTM D422 for each material type. Perform tests and analyses of aggregate material in accordance with WSDOT Standard Specifications. If tests indicate materials do not meet specified requirements, change material and retest.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions: Verify as follows:
1. Verify survey benchmark and intended elevations for Work are as indicated.
2. Verify erosion control is in place and operating properly.
3. Verify locations and elevations of existing pipes and structures at points of connection and at crossings prior to beginning Work. Pothole, expose pipes, determine invert elevations, verify with design, and inform Engineer of deviations affecting design prior to mobilizing crews and beginning construction.
4. Locate existing utilities, avoid damage or disturbance. For aid in utility location call "Dial Dig 1-800-424-5555," 48 hours (two working days) prior to beginning construction. There are utilities on site that Dial Dig will not locate. Employ and pay for locator service to locate and mark utilities in addition to "DIAL DIG" service

3.2 EROSION CONTROL

A. Refer to Erosion Control Plan and Section 31 25 00.
B. Install and maintain TESC measures in accordance with the project documents.
C. LEED: Refer to Section 01 35 63 Sustainability Certification Project Requirements for additional information relating to execution of the following LEED credits:
1. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls

3.3 PREPARATION

A. Protection:
1. Protect and maintain existing utilities that are to remain.

2. Identify existing structural foundations near excavations. Verify excavation will not undermine footings or supports and cause damage to structures.
3. Protect plant life, lawns, trees, and other features remaining as portion of final landscaping or preserved for erosion control.
4. Protect benchmarks, existing structures, rockeries, sidewalks, railings, paving, and curbs to remain,
5. Protect pavement or paved areas intended to remain from damage.
6. Use all means necessary to prevent erosion of freshly graded areas during construction or until such time that permanent drainage and erosion control measures are fully operational.

3.4 CONSTRUCTION

A. Grade and Alignment:
1. Identify and set required lines, levels, contours, and datum.
2. Stake alignment and grade and construct in locations shown on Drawings.
3. Comply with City of Olympia requirements for stormwater, water, sewer, and power.
4. Establish extent of excavation by area and elevation.
5. Adjust alignment and grade to accommodate conflicts and field conditions. Obtain A/E's approval prior to adjustments.

B. Utilities And Structures, Shoring and Bracing of Excavation:
1. Provide sheeting, shoring, and bracing in accordance with state and local codes.
2. Do not use horizontal strutting below pipe barrel.
3. Do not use pipe as support for trench bracing.
4. Do not remove shoring below top of pipe.
5. Backfill immediately following removal of shoring and bracing.
6. Support adjacent structures, including utilities and pipe chases, which may be damaged by excavation Work.

C. General Excavation:
1. Perform excavation of every description and whatever substance encountered to depths, lines, and grades indicated.
2. Pile trench excavated material so surface water is prevented from flowing into excavation, and there is minimum inconvenience to Owner’s access to buildings. Provide free access to fire hydrants, water valves, meters, and driveways and leave clearance to enable free flow of storm water in gutters, conduits, and natural watercourses.
3. Remove and reconstruct utilities as required to perform Work.
4. Do not interfere with or excavate within pressure prism of foundations. Pressure prism is defined as one horizontal to one vertical line projected down from nearest edge of footing bottom.
5. Hand trim excavation and leave free of loose matter.
6. Correct unauthorized excavation at no cost to Owner.
7. Schedule Work to include backfilling trenches by completion of each shift.

D. Trench Excavation:
1. Perform trench excavation in conformance to requirements of WSDOT Standard Specifications Section 7-08.03(1)A.
2. Unless otherwise indicated, open cut excavations.
3. Exercise caution in operating heavy equipment over pipelines. Do not damage existing improvements.
4. Immediately repair leaks or breaks caused by construction operations at no cost to Owner and in manner acceptable to Engineer and utility owner.
5. Control sidewalls of excavation to minimize caving.
6. In event maximum allowable trench width is exceeded, and depending on depth of trench, improve pipe bedding by utilizing concrete or other bedding materials as directed by Engineer.

7. Excavate trench bottom to lines and grades shown with proper allowance for pipe thickness and pipe bedding. Do not permit material containing rocks or cobbles larger than 2 inches in maximum dimension within 6 inches of pipe. Remove material of this type from trench bottom and replace with foundation gravel.
8. Should excavation be carried below lines and grades as shown because of trenching operations, backfill such excavated space to proper elevation as directed by Engineer, at no cost to Owner.
9. Clean trench bottom of loose and disturbed soils with smooth-bladed bucket. Make sure trench bottom is firm and free of loose soil.
10. Over-excavate trench bottom to one foot below pipe bedding. Backfill over-excavation with foundation material. Compact foundation material by tamping backhoe buckets.

E. Control of Water:
1. Keep excavation free from water. Dewater as necessary.
2. Direct drainage away from excavation.
3. Grade top perimeter of excavation to prevent surface water from draining into excavation.
4. Direct runoff and water from dewatering into sedimentation filtration. Provide additional filtration necessary to prevent silt-laden water from leaving site.

F. Pipe Bedding:
1. Provide pipe bedding in accordance with pipe materials and in accordance with agency requirements. Bedding requirements for various pipe materials are shown on Drawings.
2. Place bedding on approved trench bottom before pipe is installed. Spread smoothly to support pipe uniformly. Do not use blocking to adjust pipe to grade. Dig holes for bells as required to ensure uniform support along pipe barrel.
3. Compact bedding as follows: Compact bedding to at least 95 percent maximum density as determined by ASTM D1557 within paved areas and sidewalks. Compact bedding in other areas to at least 90 percent maximum density as determined by ASTM D1557.

G. Initial Backfill:
1. After pipe has been laid properly and inspected, place and compact initial backfill around pipe to minimum depth of 6 inches over top of pipe. Place initial backfill in lifts of not more than 6 inches in compacted thickness. Bring lifts together on both sides of pipe and carefully work backfill under pipe haunches by means of shovel, vibration, or procedures approved by Engineer. Take necessary precautions to protect pipe from damage or shifting.
2. Subsequent Backfill: Place and compact subsequent backfill material after initial backfill has been placed and approved by Engineer.
3. Perform compaction within 2 feet of existing of new structures by hand- operated vibratory compactors. Compact within 5 feet of wall to 95 percent maximum density as determined by ASTM D 1557.
4. Water settling or water jetting will not be allowed.

H. Backfilling:
1. Backfill trenches in accordance with WSDOT Standard Specifications Section 7-08.3(3).
2. Backfill to grades, contours, levels, and elevations shown on Drawings with material indicated on Drawings. On-site material is not suitable for use as trench backfill.
3. Do not backfill over wet, frozen, or spongy subgrade surfaces.
4. Place and compact backfill materials in continuous layers not exceeding 6 inches loose lift thickness when using hand equipment and 12 inch loose lift when using heavy compaction equipment such as hoe-packs. Decrease lift thickness as needed based on compaction test results.
5. Employ placement method that does not disturb or damage utilities in trenches.
6. Condition backfill within plus or minus 3 percent of its optimum moisture content so

specified compaction can be attained readily. Material containing excessive moisture, beyond moisture content for specified density as determined by laboratory compaction tests, shall not be used for backfill.

7. Raise backfill around structures evenly.
8. Finish area to uniform contour to drain properly and grade entire surface to neat appearing surface.
9. Remove excavated on-site soil material and surplus fill material from site to approved contractor-provided off-site waste site.

I. Compaction:

1. Compact first 18 inches of backfill above pipe zone with hand-operated compaction equipment.
2. Under pavements, curbs, curbs and gutters, sidewalks, and other structural improvements: minimum 95 percent, within 2-foot vertical of finish subgrade and minimum 90 percent below this level per ASTM D1557. Compact pavement bases in accordance with Section 32 13 13.
3. Compact backfill material by towed or self-propelled mechanical compactors in uniform layers not exceeding 12 inches in loose depth.

3.5 FIELD QUALITY CONTROL

A. Obtain required inspections, tests, approvals, and location recording prior to covering or enclosing Work.

B. Site Tests:

1. Owner will perform compaction tests.
2. If tests indicate Work does not meet specified requirements, recompact and retest, or remove and replace and retest at direction of Engineer.

C. Inspection: Owner will observe Work at the following milestones

1. After completion of trench and prior to placing bedding and pipe.
2. After completion of pipe and bedding, and prior to backfilling.

3.6 PROTECTION

A. Protect bottom of excavations and soil adjacent to and beneath foundations from freezing.

B. Protect excavated material and excavating foundation (subgrade) from damage due to excess moisture.

C. Take necessary precautions to protect soil from excess moisture by such means necessary, including: Construct ditches and swales to intercept surface water; cover stockpiled material; cover exposed trenches; do not expose more area than can be worked and protected; and dewater by pumping.

3.7 CLEANUP

A. Dispose of excavated surplus or unsuitable material at Contractor provided off- site location approved by Owner.

B. Remove and dispose of abandoned pipe, broken pavement, and rubbish from Project site in accordance with laws, regulations, and ordinances of approved off- site location provided by Contractor.

C. Dispose of waste, surplus, and unsuitable materials according to laws, regulations, and ordinances.

END OF SECTION 31 23 35

SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROLS

PART 1 – GENERAL

1.1 SUMMARY

A. This work shall consist of temporary erosion and sediment control measures, as shown on the temporary erosion control and sediment (TESC) plan and per the stormwater pollution prevention plan (SWPPP). This work is intended to provide prevention of erosion and control of sediment within the limits of the project and to minimize damage to the Work and adjacent property in accordance the Department of Ecology NPDES permit if applicable. The Contractor is responsible for transfer of coverage from SCJ Alliance to the appropriate contact within their organization, for installation, maintenance, and revisions to the erosion and sediment control measures as site conditions change. Contractor is also responsible for all requirements of the DOE General Stormwater permit including providing a Certified Erosion and Sediment Control Lead (CESCL), performing required monitoring, and preparing and submitted Discharge Monitoring Reports (DMR).

B. Related Sections:
1. Section 31 11 00 Clearing and Grubbing
2. Section 31 20 00 Earthmoving
3. Section 01 35 63 sustainability Certification Project Requirements

1.2 REFERENCES

A. Reference the following standards:
1. Department of Ecology (DOE) Stormwater Management Manual for Western Washington Volume II Construction Stormwater Pollution Prevention.
2. Erosion Control (TESC) and Demolition Plan.
3. Geotechnical Engineering Report by Landau Associates.

1.3 QUALITY ASSURANCE

A. A pre-installation meeting shall be held with the Owner prior to work related to this section.

1.4 SUBMITTALS

A. Submit cut sheets or shop drawings for all materials.
B. Submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the DOE Construction Stormwater General Permit.

PART 2 - PRODUCTS

Erosion and sediment control products are numerous and varied. The following is a listing of expected products that will be used based on the TESC plan. If erosion control and sediment control needs change during construction, the Contractor may propose alternative measures and products. All alternative products must be approved by the Owner prior to implementation.

2.1 Inlet Protection

A. Inlet protection inserts shall be Streamguard for Sediment or approved equal.

2.2 Filter Fabric Fence

A. Approved filter fabrics are Mirafi 140N or approved equal.

2.3 Quarry Spalls

A. As specified in the WSDOT Standard Specifications Section 9-13.1(5) “Quarry Spalls”

PART 3 - EXECUTION

3.1 GENERAL

A. Maintain, upgrade and/or relocate existing temporary erosion and sedimentation control measures as necessary.
   1. Contractor to follow the intent of the Department of Ecology NPDES Construction General Stormwater Permit, shall provide a CESCL, and will perform monitoring and reporting.
   2. The implementation of the Erosion and Sediment Control plans and the construction, maintenance, replacement, and upgrading of these facilities is the responsibility of the Contractor until all construction is approved. The Temporary Erosion and Sediment Control (TESC) facilities shown on the plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to ensure that sediment-laden water does not enter the drainage system or violate applicable water standards.
   3. The TESC facilities shown are the minimum requirements for anticipated site conditions. During the construction period, the erosion control facilities shall be upgraded (e.g. sumps, construction of ditches and silt fences, etc.) as needed. Contractor shall pay for all costs associated with the construction, maintenance, upgrading, relocation and removal of the erosion control system throughout project duration.
   4. Access Roads: Provide wheel-cleaning stations to clean wheels and undercarriage of trucks before leaving site, as necessary to prevent dirt from being carried onto public roads. If roads are fouled, they must be cleaned immediately in conformance with Owner, and WSDOT requirements, as indicated on the plans and all governing requirements and regulations.
   5. Provide catch basin protection for catch basins in and adjacent to work area. Provide catch basin protection for new catch basins and area drains following installation, until site paving is completed.
B. Provide additional temporary erosion and sedimentation control measures as required by plans, notes, details and specifications.
C. LEED: Refer to Section 01 35 63 Sustainability Certification Project Requirements for additional information relating to execution of the following LEED credits:
   1. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls.

3.2 DRAINAGE COLLECTION

A. Contractor shall install and put into service those sections of the proposed storm drain system necessary to collect TESC outflows.
B. Additional collection structures shall be installed as necessitated by construction activities to ensure that sediment laden water does not enter the natural or public drainage system.
C. Clean storm drain system of all debris following removal of TESC facilities and following permanent stabilization of site.

END OF SECTION 31 25 00

SECTION 32 16 00
CURBS AND GUTTERS

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes:
   1. Concrete Traffic Curb
   2. Concrete Traffic Curb and Gutter
   3. Concrete Extruded Curb
   4. Wheel Stops

B. Related Sections:
   1. Section 32 13 13 Concrete Paving
   2. Section 01 35 63 sustainability Certification Project Requirements

1.2 REFERENCES

A. Reference the following standards:
   1. The current WSDOT Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT).

B. American Society for Testing Materials (ASTM).

C. American Association of State Highway and Transportation Officials (AASHTO).

1.3 QUALITY ASSURANCE

A. A pre-installation meeting shall be held with the Owner prior to work related to this section.

B. Concrete Standards: Comply with provisions following standards except where requirements that are more stringent as indicated:
   1. Section 8-04 of the WSDOT Standard Specifications.
   2. Concrete Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C94 requirements for production facilities and equipment.

1.4 SUBMITTALS

A. General: Submit the following according to the General Provisions and Division 1 Specifications Sections of the Contract.
   1. Design mixes for the concrete. Include revised mix proportions when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
   2. Material certificates may be submitted in lieu of material laboratory test reports when permitted by the Owner. Material certificates shall be signed by the manufacturer and the Contractor certifying that each material item complies with or exceeds requirements.

1.5 WARRANTY

A. Replace cracked, unsatisfactory finish work, or irregularities immediately upon notification.

PART 2 - PRODUCTS

2.1 GENERAL

A. Concrete curbs and sidewalks shall be air entrained concrete Class 3000 concrete conforming to Section 6-02 of WSDOT Standard Specifications.

B. Concrete Mix: Comply with requirements of Section 5-05.3(5) of the WSDOT Standard Specification.

2.2 FORMS

A. Forms shall be metal or wood and comply with Section 8-14.3(2) of the WSDOT Standard Specification.

2.3 CONCRETE MATERIAL

A. Portland Cement: shall be in accordance with Section 9-01.2(1) Type 1 of the WSDOT Standard Specification. Use one brand of cement throughout project unless otherwise acceptable by Owner
B. Fine Aggregate: shall be in accordance with Section 9-03.1(2) of WSDOT Standard Specification. Provide aggregates from a single source.
C. Coarse Aggregate: shall be in accordance with Section 9-03.1(4) of WSDOT Standard Specification. Provide aggregates from a single source.
D. Water: shall be in accordance with Section 9-25.1 of WSDOT Standard Specification.
E. Admixtures: shall be in accordance with Section 9-23.6 of WSDOT Standard Specification.
F. Curing: shall be in accordance with Section 8-14.3(4) WSDOT Standard Specification.
G. Concrete Mixing: Comply with requirements of Section 5-05.3(5) of the WSDOT Standard Specification.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. Proof-roll prepared base surface to check for unstable areas and verify need for additional compaction. Do not begin work until such conditions have been corrected and are ready to receive paving.
B. Remove loose material from compacted base surface immediately before placing concrete.

3.2 EROSION CONTROL

A. Refer to Erosion Control Plan and Section 31 25 00.
B. Install and maintain TESC measures in accordance with the project documents.
C. LEED: Refer to Section 01 35 63 Sustainability Certification Project Requirements for additional information relating to execution of the following LEED credits:
   1. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls

3.3 PLACING AND FINISHING

A. Comply with the requirements of Section 8-14.3(3) of WSDOT Standard Specification.

3.4 CURING

A. Comply with the requirements of Section 8-14.3(4) of WSDOT Standard Specification.

3.5 CONCRETE CURBS

A. Forming: Form straight sides against wood or metal. Form tapered sides with a metal mule constructed to required section profile. Check completed formwork and screeds for grade and alignment to following tolerances:
   1. Top of Forms: Not more than 1/8 inch in 10 feet
   2. Vertical Face on Longitudinal Axis: Not more than ¼ inch in 10 feet

B. Mixing and Placing Concrete: Conform to the requirements for mixing and placing 4,000 psi 28-day concrete. Concrete to be placed per Section 8-04 of WSDOT Standard Specification.
C. Joints: Expansion joints to be placed at 30 feet on center. Install so that expansion joint material is ¼ inch below the surface of the concrete.
D. Finish – Broom finish. Round all edges including edges formed by expansion joints.

3.6 WHEEL STOPS

A. Install wheel stops in bed of adhesive applied as recommended by manufacturer.
B. Securely attach wheel stops to paving with not less than two galvanized-steel bars located as shown on plans. Install bars in drilled holes in the paving and bond bars to wheel stop. Recess head of bars beneath top of wheel stop.

3.7 REPAIRS AND PROTECTION

A. Remove and replace concrete curb that is broken, damaged, or defective, or does not meet the requirements of this section.

3.8 CLEANING

A. Dispose of all waste material in compliance with project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management

END OF SECTION 32 16 00

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes the following:

1. Trees
2. Shrubs
3. Ground cover
4. Mulches
5. Soils

B. Related Sections include the following:

1. Division 31, Earthwork.

1.03 DEFINITIONS

A. Balled and Burlapped Stock: Exterior plants dug with firm, natural balls of earth in which they are grown, with ball size not less than sizes indicated wrapped, tied, rigidly supported, and drum-laced as recommended by ANSI Z60.1.

B. Balled and Potted Stock: Exterior plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than sizes indicated.

C. Container-Grown Stock: Healthy, vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for kind, type, and size of exterior plant required.

D. Finish Grade: Elevation of finished surface of planting soil.

E. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

F. Planting Soil (for standard planting beds, lawns, and tree pits): Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.

G. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

1.04 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: For each of the following:

1. Submit one half cubic foot sample of topsoil. Include written statement giving location of properties from which topsoil is to be obtained. If a premixed topsoil is used at the contractor's option submit the above sample.
2. Submit one half cubic foot sample of mulch.
3. Edging materials and accessories, of manufacturer's standard size, to verify color selected.

C. Product Certificates: For each type of manufactured product, signed by product manufacturer, and complying with the following:

1. Manufacturer's certified analysis for standard products.
2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

D. LEED Submittals: For components of this section submit the following in compliance with Section 01 35 63 Sustainability Certification Project Requirements.

1. LEED Submittal Coversheet
2. Materials and Resources Submittals:
   a. MR Credit BPDO - Sourcing of Raw Materials: Manufacturer's documentation demonstrating product claims of extended producer responsibility program, recycled-content, or FSC certified wood, in accordance with Section 01 35 63 Sustainability Certification Project Requirements.
      (1) Include manufacturer documentation confirming city/state/country of material extraction, manufacturer and purchase and air distance from these locations to project site for products extracted and manufactured within 100 miles of the project site.

E. Qualification Data: For landscape Installer.

F. Material Test Reports: For [existing surface soil] [and] [imported topsoil].

1. Imported topsoil: Contractor must submit a soil fertility and micronutrient analysis test of the proposed material from the proposed import source. The test must provide separate and appropriate recommendations for fertilizer and soil amendments specific to 1) lawn areas and 2) plant beds, tree pits and planters. Contractor shall coordinate, obtain and pay for all soil tests.
2. Salvaged on site topsoil: Contractor must submit a soil fertility and micronutrient analysis test from a representative sample of material if any is proposed for use. The test must provide separate and appropriate recommendations for fertilizer and soil amendments specific to 1) lawn areas and 2) plant beds, tree pits and planters. Contractor shall coordinate, obtain and pay for all soil tests.

G. Planting Schedule: Indicating anticipated planting dates for exterior plants.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of exterior plants.

1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when exterior planting is in progress.

B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

C. Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.

D. Observation: Owner's Representative may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Owner's Representative retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

1. Notify Owner's Representative of sources of planting materials seven days in advance of delivery to site.

2. Before Owner is to assume maintenance responsibility: 7 days

3. Before time requested for inspection for Substantial Completion: 7 days, in writing.

E. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver exterior plants freshly dug.

B. Do not prune trees and shrubs before delivery, except as approved by Owner's Representative. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.

C. Handle planting stock by root ball.

D. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.

1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.

2. Do not remove container-grown stock from containers before time of planting.

3. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.07 COORDINATION

A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.08 WARRANTY

A. Special Warranty: Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, or incidents that are beyond Contractor's control.

1. Warranty Period for Trees and Shrubs: One year from date of Substantial Completion.
2. Warranty Period for Ground Cover and Plants: One year from date of Substantial Completion.
3. Remove dead exterior plants immediately. Replace immediately unless required to plant in the succeeding planting season.
4. Replace exterior plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
5. A limit of one replacement of each exterior plant will be required, except for losses or replacements due to failure to comply with requirements.

1.09 MAINTENANCE

A. Trees and Shrubs: Maintain for the following maintenance period by pruning, cultivating, watering, weeding, fertilizing, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Restore or replace damaged tree wrappings.

1. Maintenance Period: 60 days from date of Substantial Completion.

B. Ground Cover and Plants: Maintain for the following maintenance period by watering, weeding, fertilizing, and other operations as required to establish healthy, viable plantings:

1. Maintenance Period: 60 days from date of Substantial Completion.

PART 2 – PRODUCTS

2.01 TREE AND SHRUB MATERIAL

A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.

C. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.

D. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.

2.02 SHADE AND FLOWERING TREES

A. Shade Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required.

1. Provide balled and burlapped trees.

B. Small Upright, Spreading Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1; stem form as follows:

C. Multi-stem Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1

2.03 DECIDUOUS SHRUBS

A. Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub.

1. Provide container-grown shrubs.

2.04 CONIFEROUS EVERGREENS

A. Form and Size: Normal-quality, well-balanced, coniferous evergreens, of type, height, spread, and shape required, complying with ANSI Z60.1.

1. Provide balled and burlapped trees.

2.05 BROADLEAF EVERGREENS

A. Form and Size: Normal-quality, well-balanced, broadleaf evergreens, of type, height, spread, and shape required, complying with ANSI Z60.1.

1. Provide balled and burlapped trees.

2.06 GROUND COVER PLANTS

A. Ground Cover: Provide ground cover of species indicated on the plans, established and well rooted in pots or similar containers, and complying with ANSI Z60.1

2.07 PLANTS

A. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed on the plans.

B. Fast-Growing Vines: Provide vines of species indicated on the plans complying with requirements in ANSI Z60.1

2.08 TOPSOIL

A. On Grade Planting Soil:

1. If any salvaged on site topsoil is proposed for use, a soil fertility analysis test shall be prepared and submitted to the Owner's Representative for consideration. On site topsoil may not be used without written consent of the Owner or Owner's Representative.

2. Offsite topsoil to be included in imported two-way topsoil shall be salvaged soil dug from well-drained sites where topsoil occurs in a depth of not less than 4"; do not obtain from bogs or marshes. To be provided by Pacific Topsoils, Inc. (1-800-884-7645), or approved others.

3. Provide imported two-way mix, screened, friable, natural sandy loam, consisting of 2/3 soil and 1/3 decomposed organic matter, free of subsoil, ad-mixtures or soil amendments, clay lumps or clods of hard earth, brush, weeds, stumps, roots, other litter, sticks, stones larger than 1-1/2 inches in any dimension or other extraneous material or toxic matter harmful to plant growth. Soil shall not be used in a muddy condition.

4. All topsoil required to be stored on site prior to installation will be located in areas designated by Owner's Representative.

B. On Structure Planting Soil: See Green Roof Specifications

2.09 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:

1. Class: Class O, with a minimum 95 percent passing through No. 8 sieve and a minimum 55 percent passing through No. 60 sieve.

2. Provide lime in form of dolomitic limestone.

B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 sieve and a maximum 10 percent passing through No. 40 sieve.

C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.

D. Aluminum Sulfate: Commercial grade, unadulterated.

E. Perlite: Horticultural perlite, soil amendment grade.

F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.

G. Sand: Clean, washed, natural or manufactured, free of toxic materials.

2.10 ORGANIC SOIL AMENDMENTS

A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

1. Organic Matter Content: 50 to 60 percent of dry weight.

B. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.

C. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.

D. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.11 FERTILIZER

A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 6 percent nitrogen and 20 percent phosphoric acid.

B. Commercial Fertilizer: Controlled release, commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. For trees and shrubs, provide fertilizer with not less than 10% total nitrogen, 10% available phosphoric acid and 10% soluble potash.

C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium.

D. No fertilizer is to be added to bog planting.

2.12 MULCHES

A. Organic Mulch (shrub beds): Pacific Garden Mulch as supplied by Pacific Topsoils, Inc., Bothell, Washington, (425) 337-2700, or approved equal. Mulch shall be composted yard and garden waste. The moisture content shall be 40% or more, retained with normal watering or rainfall, and free of leaves, twigs, and other debris to the satisfaction of the Owner's Representative. Submit sample for Owner's Representative's approval.

B. Aquatic and Pond Edge Planter (as shown on drawings): birdseye gravel mulch 2” depth (no filter fabric).

2.13 STAKES AND GUYS

A. Upright and Guy Stakes: 2" x 2" x 10' Lodgepole Pine stake pointed at one end. Stakes to be painted black.

B. Guy and Tie Wire: ASTM A 641/A 641M, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.

C. Guy Cable: 5-strand, 3/16-inch- diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.

D. Hose Chafing Guard: Reinforced rubber or plastic hose at least 1/2 inch in diameter, black, cut to lengths required to protect tree trunks from damage.

E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

2.14 MISCELLANEOUS PRODUCTS

A. Anti-desiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.

B. Trunk-Wrap Tape: Two layers of crinkled paper cemented together with bituminous material, 4-inch- wide minimum, with stretch factor of 33 percent.

C. Filter Fabric: Geotextile fabric designer for filtration. Polyspun 350 by ACF West Inc. (503) 771-5115, or equal.

2.15 PLANTING SOIL MIX

A. Thoroughly blend and mix the imported topsoil and soil amendment materials while in a moist condition or maintain approved premixed topsoil in moist condition.

B. Shrub Beds:

1. Topsoil: 12-inch minimum depth, additional as needed to meet grades, hold 2" below adjacent paved walks, curbs and planter walls.

C. Plant Pit and Trench Backfill:

1. Excavated soil, supplemented with topsoil. Mix shall be equal parts of each.

PART 3 – EXECUTION

3.01 LEED: REFER TO SECTION 01 35 63 SUSTAINABILITY CERTIFICATION PROJECT REQUIREMENTS.

A. Sustainable Sites – Construction Activity Pollution Prevention: Comply with provisions of 01 50 00 Temporary Facilities & Controls.

B. Materials & Resources – Construction Waste Management: Comply with provisions of Section 01 74 00 Cleaning and Waste Management.

3.02 EXAMINATION

A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.

B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Lay out individual tree and shrub locations and areas for multiple exterior plantings. Stake locations, outline areas, adjust locations when requested, and obtain Owner's Representative's acceptance of layout before planting. Make minor adjustments as required.

D. Apply anti-desiccant to trees and shrubs using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage to protect during digging, handling, and transportation.

1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

3.04 PLANTING BED ESTABLISHMENT

A.

1. Place all soil to the required finished grades. Except where drawings or details show otherwise, place to the following minimum depths and levels (measured after initial setting of soil):

a. Minimum Depths:

Shrub Areas	12" minimum depth
Groundcover Areas	12" minimum depth
Aquatic Areas	12" minimum depth

b. Levels:

c. All Planting Areas 2" below adjacent surfaces.

2. Place soil over prepared subgrade and allow to settle or compact by light rolling such that it firms against deep footprints. Do not compact more than is necessary to meet this requirement.

3. Crown or slope for positive surface drainage.

4. Soil shall be moist (25% to 75% of field capacity) but not wet when placed, and shall not be handled if it is frozen or so wet that its structure will be altered.

B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades. Crown all planting beds.

C. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

3.05 TREE AND SHRUB EXCAVATION

A. Pits and Trenches: Excavate circular tree pits as shown on the plans and details. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation. Fully excavate street pits to the extent of paved opening.

1. Excavate approximately for balled and burlapped stock as shown on the plans.

B. Subsoil removed from excavations may be used as backfill. Use ½ backfill with ½ prepared topsoil

C. Obstructions: Notify Owner's Representative if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

1. Hardpan Layer: Drill 6-inch- diameter holes into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.

D. Drainage: Notify Owner's Representative if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.

3.06 TREE AND SHRUB PLANTING

A. Set balled and burlapped stock plumb and in center of pit or trench with top of root ball 2 inch above adjacent finish grades.

1. Remove burlap and wire baskets from tops of root balls and partially from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.

2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.

B. Set container-grown stock plumb and in center of pit or trench with top of root ball 2 inch above adjacent finish grades.

1. Carefully remove root ball from container without damaging root ball or plant.

2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.

C. Organic Mulching: Provide two-inch thick minimum over entire tree and shrub areas, within two days after planting.

1. Prevent mulch contact with plant foliage.

2. Place a 3-foot diameter circle of mulch around trees in lawn areas.

D. Wrap trees of 2-inch caliper and larger with trunk-wrap tape. Start at base of trunk and spiral cover trunk to height of first branches. Overlap wrap, exposing half the width, and securely attach without causing girdling. Inspect tree trunks for injury, improper pruning, and insect infestation; take corrective measures required before wrapping.

3.07 TREE AND SHRUB PRUNING

A. Pruning: Prune, thin out and shape trees and shrubs in accordance with standard horticultural practice. Do no pruning prior to approval by Owner's Representative.

1. Prune trees to retain required height and spread, and at no time more than 1/3 of any dimension of the plant.

2. Unless otherwise directed by Owner's Representative, do not cut tree leaders, and remove only injured, broken or dead branches from trees.

3. Remove and replace excessively pruned or deformed stock resulting from improper pruning.

4. Prune without distorting basic character form of all plants and only to the extent necessary for each plant.

3.08 GUYING AND STAKING

A. Upright Staking and Tying: As shown on the drawings.

3.09 GROUND COVER AND PLANT PLANTING

A. Set out and space ground cover and plants as indicated on the plans.

B. Dig holes large enough to allow spreading of roots, and backfill with planting soil.

C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.

D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

F. Provide two-inch thick minimum depth of mulch over entire groundcover areas, within two days after planting.

1. Prevent mulch contact with plant foliage.

3.10 CLEANUP AND PROTECTION

A. During exterior planting, keep adjacent pavement and construction clean and work area in an orderly condition.

B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

C. Dispose of all waste material in compliance with project's Waste Management Plan in accordance with Section 01 74 00 Cleaning and Waste Management.

3.11 DISPOSAL

A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 33 11 00
WATER UTILITIES

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
   1. This work shall consist of constructing water mains and appurtenances.
B. Related Sections:
   1. Section 31 20 00 Earth Moving
   2. Section 31 23 35 Excavation Backfilling and Compaction

1.2 REFERENCES

A. Reference the following standards:
   1. Current copy of the WSDOT Standard Specifications for Roads, Bridge and Municipal Construction.
   2. City of Lacey Development Guidelines and Public Works Standards
   3. American Water Works Association (AWWA)

1.3 SUBMITTALS

A. Submit cut sheets for all materials including pipe and fittings.

1.4 QUALITY ASSURANCE

A. A pre-installation meeting shall be held with the Owner prior to work related to this section.
B. The Contractor shall be responsible for all coordination with City of Lacey.

1.5 PROJECT CONDITIONS

A. Interruption of Existing Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
   1. Notify Owner no fewer than two business days in advance of proposed interruption of service.
   2. Do not proceed with interruption of service without Owner’s written permission.

1.6 PERMITS

A. The Contractor shall be responsible for permits, fees and inspections which are to be obtained and scheduled buy the Contractor at its own expense.

1.7 DIMENSIONS AND LAYOUTS

A. The Contractor shall be responsible for furnishing, setting and marking all line and location stakes. When work-requiring control is being performed, all necessary related equipment, supplies and instruments shall be on site. A qualified layout engineer, surveyor, or technical specialist shall be assigned to the Contractor's crew for this work. This equipment and personnel shall be available, at no additional cost to the Owner, for the purpose of verifying layout and certifying the accuracy of work on the site.
B. The Contractor shall be responsible for review of all City and Owner's records relative to the existing underground utilities. The Contractor is responsible for avoiding damage to the facilities

indicated in the project documents and records available to the contractor and shall restore all such facilities at Contractor's own expense.

C. The Contractor shall notify the Owner immediately if underground utilities not shown on the records are encountered.

D. The Contractor is responsible for preserving all benchmarks and stakes and the replacement of any that are displaced.

PART 2 - PRODUCTS

2.1 GENERAL

A. Materials for Water Distribution and Transmission: Comply with American Water Works Association (AWWA) standards and the WSDOT Standard Specifications for Roads, Bridges and Municipal Construction.

2.2 WATER PIPE

A. Water main and water service pipes shall conform to the requirements of City of Lacey Development Guidelines and Public Works Standards.

2.3 VALVES AND VALVE BOXES

A. Valves and valve boxes shall conform to the requirements of City of Lacey Development Guidelines and Public Works Standards.

2.4 THRUST BLOCKS

A. Thrust blocks shall conform to the requirements of City of Lacey Development Guidelines and Public Works Standards.

2.5 METERS

A. Meters shall shall conform to the requirements of City of Lacey Development Guidelines and Public Works Standards.

2.6 BACKFLOW PREVENTION

A. Backflow prevention assemblies shall conform to the requirements of City of Lacey Development Guidelines and Public Works Standards.

2.7 BEDDING AND BACKFILL

A. Bedding and backfill shall be per Section 31 20 00 Earth Moving and shall conform to the requirements of City of Lacey Development Guidelines and Public Works Standards.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to beginning work verify installation conditions as satisfactory to receive materials of this Section.

3.2 TRENCHING AND BACKFILL

A. Trenching and backfill shall be per Section 31 20 00 Earth Moving and shall conform to the requirements of City of Lacey Development Guidelines and Public Works Standards.

3.3 INSTALLATION

A. Shall be in accordance with the requirements of City of Lacey Development Guidelines and Public Works Standards.
B. All water mains shall be installed with a minimum cover of 42 inches.
C. Provide concrete thrust blocks at all water distribution line elbows and tees.

3.4 TESTING

A. Hydrostatic pressure test in accordance with the requirements of City of Lacey Development Guidelines and Public Works Standards.

3.5 DISINFECTION AND TESTING

A. All new water mains and repaired portions of, or extensions to, existing mains shall be flushed and disinfected in accordance with the requirements of City of Lacey Development Guidelines and Public Works Standards. AWWA C601-68 and D105-80, and Section 7-09.3(24) of the WSDOT Standard Specification. The facility will not be accepted or approved for use until after a satisfactory bacteriological report is obtained.

END OF SECTION 33 11 00

F

OWNER COMMITMENTS

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

November 1, 2021

Ashley Smith
City of Lacey
420 College St SE
Lacey, WA 98503

RE: Coverage under the Construction Stormwater General Permit

Permit number:	**WAR310734**
Site Name:	**Lacey Museum and Cultural Center**
Location:	**5700 Lacey Blvd SE**
	Lacey, WA County: Thurston
Disturbed Acres:	**2.8**

Dear Ashley Smith:

The Washington State Department of Ecology (Ecology) received your Notice of Intent for coverage under Ecology's Construction Stormwater General Permit (CSWGP). This is your permit coverage letter. Your permit coverage is effective November 1, 2021.

Retain this letter as an official record of permit coverage for your site. You may keep your records in electronic format if you can easily access them from your construction site. You can get the CSWGP, permit forms, and other information at www.ecology.wa.gov/eCoverage-packet. Contact your Permit Administrator, listed below, if you want a copy of the CSWGP mailed to you. Please read the permit and contact Ecology if you have any questions.

Electronic Discharge Monitoring Reports (WQWebDMR)
This permit requires you to submit monthly discharge monitoring reports (DMRs) for the full duration of permit coverage (from the first full month of coverage to termination). Your first sampling and reporting period will be for the month of **November** and your first DMR must be submitted by **December 15, 2021**.

You must submit your DMRs electronically using Ecology's secure online system, WQWebDMR. To sign up for WQWebDMR go to www.ecology.wa.gov/programs/wq/permits/paris/webdmr.html. If you have questions, contact the portal staff at (360) 407-7097 (Olympia area), or (800) 633-6193/option 3, or email WQWebPortal@ecy.wa.gov.

Appeal Process
You have a right to appeal coverage under the general permit to the Pollution Control Hearing Board (PCHB). Appeals must be filed within 30 days of the date of receipt of this letter. Any appeal is limited to the general permit's applicability or non-applicability to a specific discharger. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2). For more information regarding your right to appeal, go to https://apps.ecology.wa.gov/publications/summarypages/1710007.html to view Ecology's Focus Sheet: *Appeal of General Permit Coverage*.

Annual Permit Fees
RCW 90.48.465 requires Ecology to recover the costs of managing the permit program. Permit fees are invoiced annually until the permit is terminated. Termination conditions are described in the permit. For permit fee related questions, please contact the Water Quality Fee Unit at wqfee_unit@ecy.wa.gov or (800) 633-6193, Option 2.

Ecology Field Inspector Assistance
If you have questions regarding stormwater management at your construction site, please contact your Regional Inspector, Carol Serdar of Ecology's Southwest Regional Office in Lacey at carol.serdar@ecy.wa.gov, or (360) 742-9751.

Questions or Additional Information
Ecology is here to help. Please review our web page at www.ecology.wa.gov/constructionstormwaterpermit. If you have questions about the Construction Stormwater General Permit, please contact your Permit Administrator, Joyce Smith at joyce.smith@ecy.wa.gov, or (360) 407-6858.

Sincerely,

Jeff Killelea, Manager
Program Development Services Section
Water Quality Program

CITY OF LACEY
Community & Economic Development Department
420 College Street SE
Lacey, WA 98503
(360) 491-5642

SPECIAL INSPECTION AND TESTING AGREEMENT
City of Lacey Building Department
Permit # 21-1106

Prior to issuance of a permit, this form must be completed in its entirety and returned to the City for approval. The completed form must have the original signatures of acknowledgement of all parties.

Project: Museum & Cultural Center - BP1 Demo

Address: 5700 Lacey Blvd SE, Lacey WA

Owner: City of Lacey

Architect: KMB Architects

Engineer: SJC Alliance

Contractor: _____

DUTIES AND RESPONSIBILITIES

Special Inspection Firm and Special Inspectors:

The Special Inspection firm of MTC will perform special inspection for the following types of work (separate forms must be submitted if more than one firm is to be employed):

Reinforced Concrete	( )	
Bolting in Concrete	( )	
Pre-stressed Concrete	( )	
Shotcrete	( )	
Structural Masonry	( )	
Structural Steel & Welding	( )	
High-Strength Bolting	( )	
Spray-Applied Fireproofing	( )	
Smoke-Control Systems	( )	
Grading*	( )	
Other	( )	Specify: _____

**Grading does not require WABO certification.*

All individual inspectors to be employed on this project will be WABO certified for the type of inspection they are to perform. If inspection is for work that is not covered by the WABO categories, a detailed resume of the inspector and firm must be submitted. The resume must show the inspector and firm are qualified to perform the work and testing required by the project design and specifications.

The work shall be inspected for conformance with the plans and specifications approved by the City. Revisions and addenda sheets will not be used for inspection unless they have been approved by the City. The special inspector shall report to the City any revisions that are not approved.

A daily record will be maintained on site itemizing the inspections performed, for the review of all parties. Any nonconforming items shall be brought to the immediate attention of the contractor for resolution. A weekly report shall be submitted to the City; detailing the inspections and testing performed, listing any nonconforming items and resolution of nonconforming items. Unresolved nonconforming items will be detailed on a discrepancy report and presented to the building department.

A final report shall be submitted to the building department prior to the Certificate of Occupancy being issued. This report will indicate that inspection and testing was completed in conformance with the approved plans, specifications and approved revisions or addenda. Any unresolved discrepancies must be detailed in the final report.

The special inspector and special inspection firm serve in the role as "deputy" City of Lacey inspectors and as such are responsible to the City of Lacey Building Department in the performance of the required work.

Contractor:
The contractor shall provide the special inspector or agency adequate notification of work requiring inspection.

The city approved plans and specifications must be made available, at the job site for the use of the special inspector and the City inspector. The contractor shall maintain all daily inspection reports, on site, for review.

The special inspection functions are considered to be in addition to the normal inspections performed by the City and the contractor is responsible for contracting the City to schedule regular inspections. No concrete shall be poured or other work covered until approval is given by the City inspector.

Building Department:
The building department shall review any revisions and addenda. Approved copies will be given to the contractor to maintain as part of the approved plan set.

The City inspector will monitor the special inspection functions for compliance with the agreement and the approved plans.

The City inspector shall be responsible for approving various stages of construction to be covered and work to proceed.

Design Professionals:
The architect and engineer will clearly indicate on the plans and specifications for the specific types of special inspection required, and shall include a schedule for inspection and testing. The architect and engineer will coordinate their revision and addenda process in such a way as to insure all required City approvals are obtained, prior to work shown on the revisions being performed.

Owner:
The project owner, or the architect or engineer acting as the owners agent, shall employ the special inspector or agency.

ENFORCEMENT

A failure of the special inspector or firm to perform in keeping the requirements of the UBC, the approved plans and this document may void this agreement and the Building Officials approval of the special inspector. In such a case a new special inspector and/or firm would need to be proposed for approval. A failure of the design and/or construction parties to perform in accordance with this agreement may result in a STOP WORK notice being posted on the project, until nonconforming items have been resolved.

ACKNOWLEDGEMENTS

I have read and agree to comply with the terms and conditions of this agreement.

Owner: _____ Date: _____

Contractor: _____ Date: _____

Architect: _____ Date: _____

Engineer: _____ Date: _____

Special Inspector
or Inspection Agency: _____ Date: _____

ACCEPTED FOR THE CITY OF LACEY BUILDING DEPARTMENT

By: _____ Date: _____

Shaping our community together

CITY OF LACEY

November 10, 2021

Salmon-Safe
1001 SE Water Ave
Suite 450
Portland, OR 97214

Subject: Salmon-Safe Certification
Lacey Museum & Cultural Center

To whom it may concern:

The City of Lacey hereby confirms that the contractor(s) selected for demolition of the existing Lacey Museum and Cultural Center site as well as construction of the new museum will adhere to Salmon-Safe's construction management guidelines as outlined in the certification report dated August 16, 2021.

Sincerely,

DocuSigned by:
Scott Spence
30853B87F4BF42E...

Scott Spence
City Manager
City of Lacey, Washington

cc: Michele Capestany, Contract Services
Ashley Smith, Project Manager
Aubrey Collier, Design & Construction Manager
Jennifer Burbidge, Parks Culture & Recreation Director

file: PW 2019-41
D.1

SALMON SAFE

1001 SE Water Ave., Ste. 450
Portland, OR 97214
503.232.3750

October 21, 2021

Ashley Smith
City of Lacey
420 College St SE
Lacey, WA 98503

Dear Ashley:

Congratulations regarding Salmon-Safe certification for the Lacey Museum!

In the judgment of Salmon-Safe and our independent Science Team, Lacey Museum is awarded Salmon-Safe certification subject to ongoing compliance with the one pre-condition and five conditions outlined in the attached August 16, 2021 report of the Science Team.

To formalize certification, kindly sign this letter in the space provided below, indicating that the City of Lacey agrees to the conditions, and email it back to anna@salmonsafe.org.

Thanks to you and the entire project team for the commitment and enthusiasm towards achieving Salmon-Safe certification. We look forward to working with you to publicly recognize the project's certification achievement.

Kind regards,

Anna Huttel, RA
Certification Director

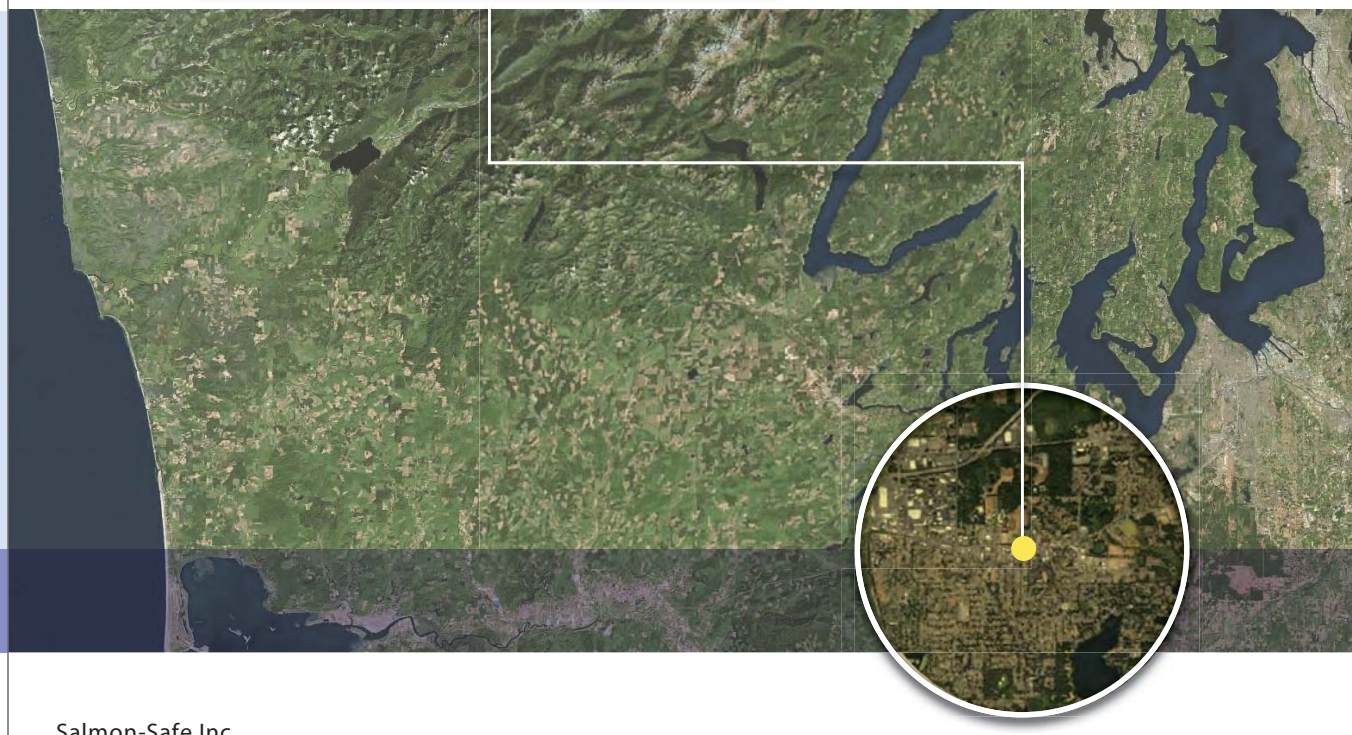
The City of Lacey agrees to meet the conditions outlined in the attached certification report dated August 16, 2021. By signing below, the City of Lacey also confirms that construction and operation of the site is not in violation of national, state, or local environmental laws, or associated administrative rules or requirements as determined by a regulatory agency in an enforcement action, per General Standard 1.

DocuSigned by:
Scott Spence
30853B87F4BF42E...
Authorized Representative

11/12/2021
Date

SALMON-SAFE INC.

REPORT OF THE SCIENCE TEAM REGARDING SALMON-SAFE CERTIFICATION OF THE LACEY MUSEUM AND CULTURAL CENTER LACEY, WASHINGTON



Salmon-Safe Inc.
1001 SE Water Ave, Suite 450
Portland, Oregon 97214
503.232.3750
info@salmonsafe.org

August 16, 2021

www.salmonsafe.org

RECOMMENDATION SUMMARY

The Salmon-Safe Science Team is pleased to recommend that the City of Lacey's new Lacey Museum and Cultural Center at 5700 Lacey Blvd. SE in Lacey, Washington, be certified Salmon-Safe, subject to the conditions detailed in this report.

Background

In 2000, Salmon-Safe expanded beyond agricultural land certification to apply the Salmon-Safe assessment and certification process to land and water management within the urban realm. This initiative significantly advanced restoration efforts in urbanized watersheds by developing urban aquatic protection guidelines and a citizen education campaign throughout the Pacific Northwest.

Working closely with independent scientists and technical experts, Salmon-Safe developed a comprehensive certification framework oriented towards reducing impacts on water quality and fish habitat from urban land and water management practices. Since 2005, more than 80 urban sites have transitioned to Salmon-Safe certification in Oregon and Washington, including Nike World Headquarters, Toyota at the Port of Portland, University of Washington Seattle and Bothell Campuses, Oregon Convention Center, and other institutional, corporate and residential development sites.

In 2014, Salmon-Safe developed certification standards for highly urbanized sites. These Urban Certification Standards (*https://www.salmonsafe.org/getcertified/development*) are applicable across a variety of urban development landscapes, ranging from high-density urban infill to corporate campuses. These standards are also applicable to museum sites. The Lacey Museum and Cultural Center is the first museum site to seek Salmon-Safe certification. While the urban standards are designed as a stand-alone program, they can also complement other leading certification standards, such as LEED, Sustainable Sites, Envision and Earth Advantage, providing a water quality and habitat-focused bioregional overlay.

OVERVIEW OF THE PROJECT

The City of Lacey has been planning to expand and relocate the existing Lacey Museum for over ten years. The new museum will be located on two parcels totaling 2.80 acres. The site is bounded by Pacific Avenue to the north, Clearbrook Drive to the east, Lacey Boulevard to the south, and Lebanon Street to the west.

The long-term goals for the museum are to be an anchor of the City's new Depot District and to provide a place to educate visitors about Lacey's history and culture. In addition to providing approximately 15,000 square feet of indoor exhibit, storage, and event space in the single-story building, the

Architect's rendering of the Lacey Museum and Cultural Center *(image courtesy of City of Lacey)*

museum campus already includes a train-themed playground and a replica of the historic Lacey Depot, which includes picnic tables and restrooms for Karen Fraser Woodland Trail users. The museum grounds, including the parking lot, will also be used for event space.

The project is being constructed in four phases. The completed Phase 1 consisted of the Lebanon Street extension, installation of 20 parking stalls, the Lacey Depot, and the train-themed playground. Phase 2 is the site design, which is complete. Museum design has benefited from collaboration with local Native American tribes, resulting in an art installation paying tribute to nine area tribes and a garden that will feature many plant species traditionally used by Native Americans for food and household products.

Phase 3, scheduled for 2022, will transform the site into a pre-development stage by demolishing the existing warehouse building and gravel parking area. Phase 4 will consist of construction of the Lacey Museum and Cultural Center. The timeline for Phase 4 has not been determined and is dependent on obtaining additional funding.

THE ASSESSMENT PROCESS

The Salmon-Safe assessment process consisted of a document review and a site assessment, culminating in a certification report (this document). These tasks were conducted by Salmon-Safe staff and the interdisciplinary Science Team with expertise in aquatic ecosystems, innovative stormwater management, and landscape design management, as summarized below.

Science Team

The interdisciplinary team conducting the assessment on behalf of Salmon-Safe was composed of Tad Deshler, Dr. Richard Horner and Chuck McDowell.

Tad Deshler: *Environmental Scientist, Coho Environmental*

Mr. Deshler's practice focuses on environmental assessment and impact analysis, with particular focus on the interaction between built and natural environments. Much of his project work has centered around aquatic sites, or at the interface between aquatic sites and the adjacent upland environments, where understanding the transport mechanisms that connect upland and in-water environments is paramount. Tad earned a BA degree in Aquatic Biology from the University of California at Santa Barbara and an MS degree in Animal Science from the University of California at Davis. Tad also has specialized expertise in sediment assessment and management, risk assessment, and chemical transport and fate studies.

Dr. Richard Horner: *Stormwater Management Expert, University of Washington*

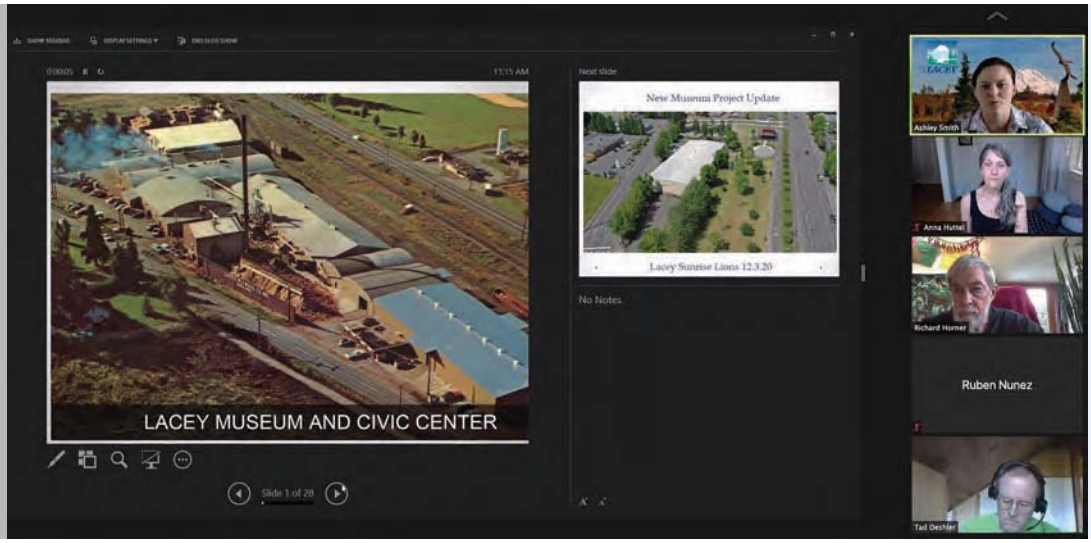
Dr. Horner received engineering BS and MS degrees from the University of Pennsylvania and a PhD in civil and environmental engineering from the University of Washington in 1978. After 13 years of college teaching and professional practice, he joined the University of Washington research faculty in 1981, where he held appointments in Civil and Environmental Engineering, Landscape Architecture, and the Center for Urban Horticulture. His principal research interests involve analyzing the effects of human activities, especially in urban areas, on freshwater ecosystems and solutions that protect these resources. Dr. Horner founded the Center for Urban Water Resources Management in 1990 to advance applied research and education in these areas. He is now emeritus research associate professor and splits his time between private practice and some continuing university research.

Chuck McDowell: *Associate Landscape Architect, Mithun*

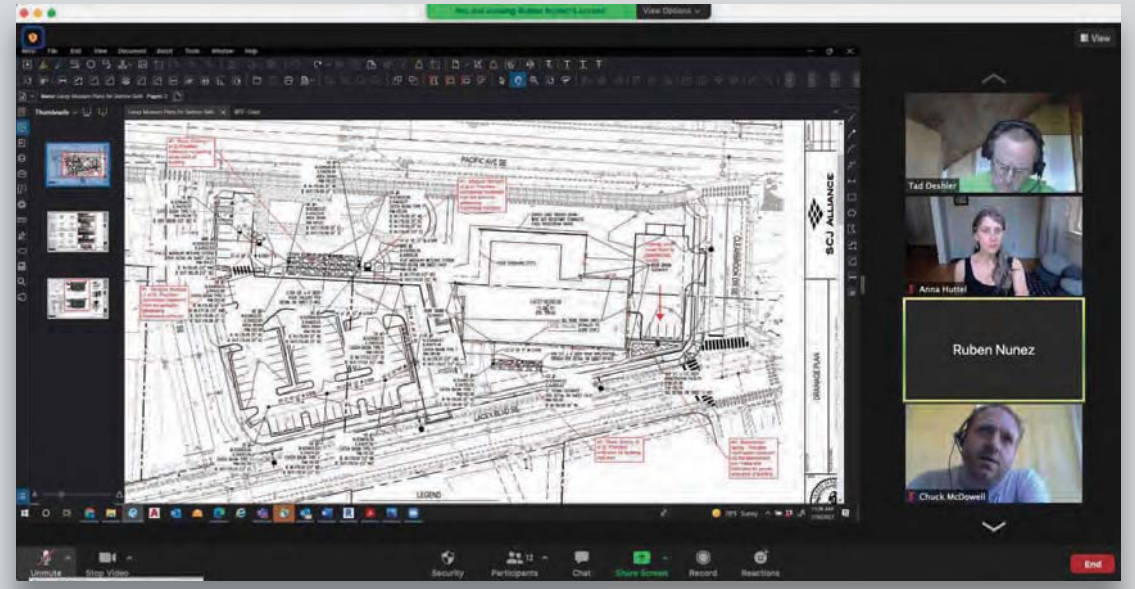
With a background in both design and aquatic sciences, Chuck's professional focus is on the integration of research into the design process in order to promote the balance between ecological function, user experience, and cultural context. Having worked in communities in the Midwest and along the West Coast, Chuck's previous work has ranged from community outreach, watershed planning, and environmental flows assessments, to campus, site and green infrastructure design. Chuck earned his MLA from Kansas State University and his MS in Conservation Ecology from the University of Michigan.

Site Assessment

The Lacey Museum project team from the City of Lacey, KMB Architects, SCJ Alliance and Murase Associates assembled documentation that was reviewed by Salmon-Safe Science Team members before, during and after the site assessment. Members of the Science Team conducted the field visit portion of the assessment prior to the July 30, 2021 virtual site assessment meeting with the project team. At that meeting, the Science Team had an opportunity to discuss specific site attributes with the project team. Later that day, the Science Team, supported by Salmon-Safe staff, met to review the certification criteria against notes taken during the process. On August 16, 2021, the Science Team and Salmon-Safe staff finalized conditions for certification and reached a final unanimous decision on certification.



The project team presents an overview of site history to the Salmon-Safe Science Team.



TOP: Ashley Smith (City of Lacey) discusses sustainability goals for the project. **ABOVE:** Ruben Nunez (KMB Architects) describes the civil engineering design intended to treat 100% of stormwater onsite.

GENERAL OBSERVATIONS

In the judgment of the Salmon-Safe Science Team, the project designed by the Lacey Museum team incorporates many elements in accordance with Salmon-Safe standards, particularly related to stormwater management.

Stormwater runoff from the disturbed areas of the project will be collected, treated and infiltrated onsite. No offsite stormwater discharge from the improvements and development are anticipated. Enhanced treatment will be provided for all pollution-generating impervious surfaces, primarily the parking lot, via the use of Modular Wetland Systems and a bioretention facility.

Some of the stormwater management features will be located underneath newly planted grass, which is an important component of the anticipated programming for the museum. Some events are likely to use outside space, particularly the turf areas. The relatively large parking area and the planned turf areas provide little or no ecological habitat. Improvements to the ecological habitat value of the project should be considered to the extent they are operationally feasible, as discussed below in the Certification Conditions section.

A particular emphasis has been given to native and drought-tolerant plant species for the landscaping, which should minimize potable water demand. The museum campus also includes many areas to be covered by natural grass, which may require more irrigation compared to the other types of landscaping. Although the irrigation plans indicate that an efficient irrigation system has been specified, tracking of potable water used for irrigation is warranted as part of an overall water management plan, as discussed below in the Certification Conditions section.

The City of Lacey is committed to remediate legacy soil contamination that may be associated with former commercial operations at the site. The resulting campus will result in improved soil quality compared to existing conditions.

The Science Team recognizes that the City of Lacey's role in providing high-quality museum space must be a primary objective for management of the site. This being said, the Science Team took note of a strong organizational motivation and enthusiasm for accomplishing this objective in an environmentally sustainable manner. In addition to seeking Salmon-Safe certification, the City of Lacey's pursuit of LEED Silver certifications is a further testament to this commitment. The Science Team is enthusiastic about providing guidance to the project team to inform construction of the Lacey Museum and its long-term maintenance.

RECOMMENDATIONS AND DISCUSSION

Certification Recommendation: The Science Team recommends that the Lacey Museum project be certified Salmon-Safe subject to the one pre-condition and five conditions listed below. All conditions are subject to annual verification by Salmon-Safe. Timelines for accomplishing objectives are measured from the official date of this Salmon-Safe conditional certification.

Pre-Condition 1: *Ensure environmental regulatory compliance*

The City of Lacey shall submit a signed statement to Salmon-Safe stating that the construction or operation of the site is not in violation of national, state or local environmental laws, or associated administrative rules or requirements as determined by a regulatory agency in an enforcement action, per General Standard 1.

TIMELINE

Compliance is a pre-condition of certification, then subject to annual verification by Salmon-Safe.

Condition 1: *Develop water conservation plan*

The design of the Lacey Museum project includes a number of water conservation features that are consistent with Salmon-Safe standards, as described above under General Observations. However, to ensure that Salmon-Safe practices are maintained over time, the City of Lacey shall prepare a water conservation plan in accordance with Standard U.2.9 and Appendix G of the Urban Standards v2.0, which are focused on reducing the use of potable water for irrigation. The plan shall include a description of the existing site water infrastructure inventory (Standard U.2.1), an evaluation of the feasibility of various water use reduction strategies (Standard U.2.3), and documentation of water conservation practices used during site maintenance (Standard U.2.6). The plan should also include a strategy for tracking landscaping water use over time and describe water conservation strategies that will be implemented under drought conditions.

> C1 continues on next page

TIMELINE

A water conservation plan shall be submitted to Salmon-Safe for review and implemented prior to substantial completion of the site, then subject to annual verification by Salmon-Safe.

Condition 2: *Prepare site-specific IPM, nutrient and chemical management plan*

The City of Lacey shall modify and supplement its IPM Procedure #302 document to make it specifically applicable to the new Lacey Museum. The document shall include a prohibition against the use of any pesticides on the Salmon-Safe High Risk Pesticide List (see Appendix E of the Urban Certification Standards v2.0). In addition to procedures related to weed management and pesticide application, the document shall describe procedures related to fertilizer applications. According to Salmon-Safe standards, soluble fertilizer rates of application are limited to no more than 0.5 lb N/1,000 square feet per application. Additional guidance on the required content of the IPM, nutrient and chemical management plan can be found in Appendix D of the Urban Certification Standards v2.0.

TIMELINE

The site-specific IPM, nutrient and chemical management plan shall be submitted to Salmon-Safe for review within one year of final site design.

Condition 3: *Commitment to adhere to Salmon-Safe construction management guidelines*

The City of Lacey shall provide a signed letter to Salmon-Safe committing that the contractor(s) selected for demolition of the existing site and construction of the new museum will adhere to Salmon-Safe's construction management guidelines. The guidelines can be found at: *https://salmonsafe.org/wp-content/uploads/2018/03/Salmon-Safe-Accreditation-Program-Guidelines-for-LSCM-Version-2.3-May-2018.pdf*

TIMELINE

The City of Lacey shall confirm agreement with this condition before ground-disturbing construction activities begin. This condition is subject to field verification during construction.

Condition 4: *Evaluate design modifications to increase ecological habitat value*

The City of Lacey shall investigate the following potential design modifications that advance fuller achievement of Salmon-Safe standards related to ecological habitat value (i.e., U.1.3, U.1.4, U.1.5, U.1.8, U.5) and report the results in terms of their operational feasibility. The report shall justify those judgments that a modification is not operationally feasible and express a commitment to implement those found to be operationally feasible and outline how the implementation will occur.

- Change the portions of the lawn that do not look like functional gathering or play spaces to understory native planting (per Standard U.5). These are located in the northeast corner of the project site and south of the museum building. If the changes to the lawn to the south of the museum building are not feasible, change the lawn to an ecolawn or meadow and maintain it accordingly. Ecolawns do not require fertilizer and can be mown less frequently (or not at all) compared to turf areas planted with the standard three-way rye blend.
- Route stormwater from the south end of the parking lot to a vegetated infiltration and/or treatment facility, which would provide the necessary

> *C4 continues on next page*

treatment while simultaneously increasing habitat value (per Standards U.1.4 and U.1.8).

- Establish a cover crop/soil management strategy for the site for the time period between when it is cleared and when the project is built (per Standard U.5.6). Use cover crop mixes and appropriately-timed mowing to build healthy soil so that the topsoil can be striped and reused as planting soil in the final phase of construction. Look at opportunities for temporary improvements to vacant or underutilized sites with low-cost plantings that have the potential to provide habitat value.
- Reuse portions of the timber from the large existing trees that are to be removed, such as the large Black Cottonwood located at the southwest corner of the site, so that they can be incorporated in the final landscape design as habitat snags or nurse log features in the native understory for additional habitat and material reuse (per Standard U.1.3).

TIMELINE

The City of Lacey shall prepare a report evaluating the recommended design changes above and submit to Salmon-Safe for review within one year of certification. Recommendations found to be operationally feasible shall be incorporated into the final site design.

Condition 5: *Avoid use of uncoated galvanized material*

The permit drawing set specifies galvanized steel landscape edging adjacent to the museum building. Standard U.1.6 states that uncoated galvanized surfaces that may come in contact with stormwater are to be expressly avoided. Accordingly, the City of Lacey shall specify an alternative landscape edging material for this application. Powder-coated galvanized steel would be an acceptable alternative.

TIMELINE

The City of Lacey shall specify an alternative landscaping edging material that does not contain uncoated galvanized metal and incorporate it into the final site design before construction begins.

Recommendations

In addition to the conditions for certification listed above, Salmon-Safe offers the following continuing improvement recommendations, adoption of which is not mandatory to achieve certification, but are considered Salmon-Safe best practices:

- **Explore opportunities for using ecolawn grass mixtures or understory native plantings in City rights-of-way**

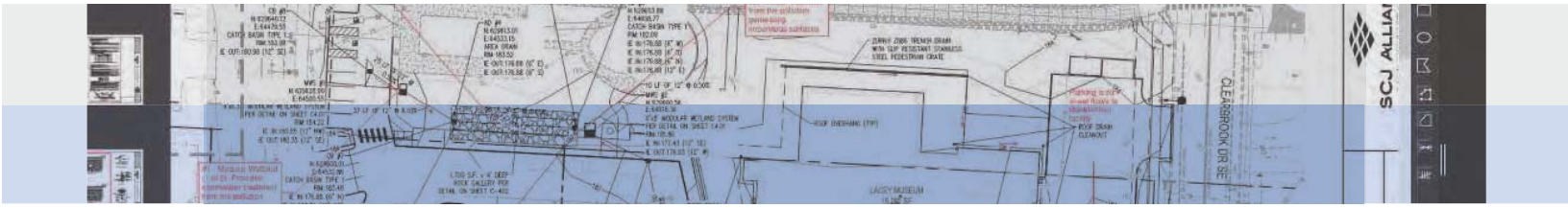
  We understand that the City of Lacey currently specifies a three-way rye blend for turf planted within City rights-of-way. We recommend that the City evaluate alternatives to this standard seed mix to reduce irrigation water use and maintenance requirements, and enhance ecological value. There are many different ecolawn seed mixes consisting of blends of fescue grasses that could achieve these objectives.

- **Visitor education related to green stormwater infrastructure**

  The new Lacey Museum will include several notable features that are consistent with Salmon-Safe standards, particularly the modular wetland and bioretention areas and the landscaping dominated by native and drought-tolerant plantings. In addition, we recommend adding building downspouts to daylight the water where feasible, which would provide another opportunity for environmental education. To foster environmental stewardship among museum visitors, we also recommend the installation of signage to describe the functioning of these features. These could be located adjacent to the trail or parking lot for more visibility. Salmon-Safe can assist by providing examples of appropriate signage as part of the communications support that is provided for each site certification.

CONCLUSIONS

Salmon-Safe and the Science Team commend the City of Lacey and their project team for their commitment to implement the conditions listed in this report, and to manage the site to continue to improve water quality and salmonid habitat over the next five years. We extend appreciation and congratulations to the Lacey Museum project team for their work in preparing for the certification assessment and assisting the Science Team in its assessment.



Creative Credits

Report design : *Jay Tracy Studios*
Architectural renderings : *KMB Architects*
Science Team member photos + virtual meeting captures : ©*Salmon-Safe Inc.*

SALMON SAFE

www.salmonsafe.org

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PREVAILING WAGE RATES

PREVAILING WAGE RATES

The following wage rates are in effect for this project.

State of Washington
Department of Labor and Industries
Washington State Prevailing Wage Rates For Public Works Contracts

Thurston County Rates For All Trades

Effective: January 6th, 2022, including any corrections issued by Labor and Industries prior to bid.

Wage Rates and the Benefit Code Key may be found at:
https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx

Supplemental to State Wage Rates may be found at:
http://www.wsdot.wa.gov/Design/ProjectDev/WageRates/default.htm

A copy is also available for viewing at the City of Lacey Public Works Engineering office located at 420 College St SE, Lacey, WA 98503. If requested, a hard copy will be mailed to you.