



City of Tacoma  
Environmental Services Department

# **SPECIFICATION NO. ES23-0117F**

**Solid Waste Landfill Cap Repair  
– Flare Station**

**Project No. 514050**

**CITY OF TACOMA**  
**ENVIRONMENTAL SERVICES DEPARTMENT**

REQUEST FOR BIDS, SPECIAL PROVISIONS, BID PROPOSAL AND CONTRACT

FOR

**SPECIFICATION NO.**  
**ES23-0117F**

**Solid Waste Landfill Cap Repair – Flare Station**

**Project No. 514050**

Jody Bratton, P.E.  
Science & Engineering Division  
Environmental Services Department

3510 South Mullen Street  
Tacoma, Washington 98409

SPECIFICATION NO. ES23-0117F

**TABLE OF CONTENTS**

NOTE: ALL BIDDERS MUST HAVE A COPY OF THE SPECIFICATIONS AND THE BID SUBMITTAL PACKAGE

REQUEST FOR BIDS

SPECIAL REMINDER TO ALL BIDDERS

SPECIAL NOTICE TO BIDDERS

PART I BID PROPOSAL AND CONTRACT FORMS

- 1 Bid Proposal
- 2 Signature Page
- 3 Bid Bond
- 4 Certification Of Compliance With Wage Payment Statutes
- 5 State Responsibility and Reciprocal Bid Preference Information
- 6 Contract
- 7 Payment Bond to the City of Tacoma
- 8 Performance Bond to the City of Tacoma
- 9 General Release Form

PART II GENERAL CONDITIONS FOR WASHINGTON STATE FACILITY CONSTRUCTION

PART III SUPPLEMENTAL CONDITIONS AS MODIFIED BY THE CITY OF TACOMA

PART IV TECHNICAL PROVISIONS

- |             |                                       |
|-------------|---------------------------------------|
| Division 01 | General Requirements                  |
| Division 02 | Existing Conditions                   |
| Division 31 | Earthwork                             |
| Appendix A  | Plans                                 |
| Appendix B  | Construction Quality Assurance Manual |

PART V STATE PREVAILING WAGE RATES AND GENERAL REQUIREMENTS

PART VI INSURANCE REQUIREMENTS



Division 01  
Jody Bratton, PE  
City of Tacoma  
326 East D Street  
Tacoma, Washington 98421-1801



Divisions 02 and 31  
Katie Saltanovitz, PE  
Landau Associates  
2107 South C Street  
Tacoma, WA 98402

7/5/23



**City of Tacoma**  
**Environmental Services/Science and Engineering Division**

**REQUEST FOR BIDS ES23-0117F**  
**Solid Waste Landfill Cap Repair – Flare Station**

**Submittal Deadline: 11:00 a.m., Pacific Time, Tuesday, August 8, 2023**

Submittals must be received by the City's Procurement and Payables Division prior to 11:00 a.m. Pacific Time.

For electronic submittals, the City of Tacoma will designate the time of receipt recorded by our email, [sendbid@cityoftacoma.org](mailto:sendbid@cityoftacoma.org), as the official time of receipt. This clock will be used as the official time of receipt of all parts of electronic bid submittals. Late submittals will be returned unopened and rejected as non-responsive.

**Submittal Delivery:** Sealed submittals will be received as follows:

**By Email:**

[sendbid@cityoftacoma.org](mailto:sendbid@cityoftacoma.org)

Maximum file size: 35 MB. Multiple emails may be sent for each submittal

**Bid Opening:** Sealed submittals in response to a RFB will be opened Tuesday's at 11:15 AM by a purchasing representative and read aloud during a public bid opening held at the Tacoma Public Utilities Administrative Building North, 3628 S. 35<sup>th</sup> Street, Tacoma, WA 98409, conference room M-1, located on the main floor. They will also be held virtually Tuesday's at 11:15 AM. Attend [via this link](#) or call 1 (253) 215 8782. Submittals in response to an RFP, RFQ or RFI will be recorded as received. As soon as possible, after 1:00 PM, on the day of submittal deadline, preliminary results will be posted to [www.TacomaPurchasing.org](http://www.TacomaPurchasing.org).

**Solicitation Documents:** An electronic copy of the complete solicitation documents may be viewed and obtained at the City's plan distribution service provider, ARC, 632 Broadway, Tacoma, WA, or by going to <http://www.e-arc.com/location/tacoma>. Prospective bidders will be required to pay reproduction costs. A list of vendors registered for this solicitation is also available at their website.

**Pre-Proposal Meeting:** A pre-proposal meeting will not be held. A site visit to the project location will be held on Tuesday, August 1, 2023 at 10:00 a.m.. The Contractor's are required to register to attend the site visit. Send your registration by 12:00 p.m. on Monday, July 31, 2023 to Dawn DeJarlais at [ddejarlais@cityoftacoma.org](mailto:ddejarlais@cityoftacoma.org).

**Project Scope:** The project consists of performing landfill cap repairs to the Landfill Gas Flare Station equipment pad with geomembrane materials as outlined in the project documents. The project includes demolition of an existing adjacent concrete pad and installation of landfill cap with geomembrane materials where the concrete pad is removed.

**Estimate:** \$30,000-\$50,000

**Paid Sick Leave:** The City of Tacoma requires all employers to provide paid sick leave as set forth in Title 18 of the Tacoma Municipal Code and in accordance with State of Washington law.

**Americans with Disabilities Act (ADA Information:** The City of Tacoma, in accordance with Section 504 of the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. Specification materials can be made available in an alternate format by emailing the contact listed below in the *Additional Information* section.

**Title VI Information:** "The City of Tacoma" in accordance with provisions of Title VI of the Civil Rights Act of 1964, (78 Stat. 252, 42 U.S.C. sections 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration of award.

**Additional Information:** Requests for information regarding the specifications may be obtained by contacting Dawn DeJarlais, Senior Buyer by email to [ddejarlais@cityoftacoma.org](mailto:ddejarlais@cityoftacoma.org).

**Protest Policy:** City of Tacoma protest policy, located at [www.tacomapurchasing.org](http://www.tacomapurchasing.org), specifies procedures for protests submitted prior to and after submittal deadline.



**Meeting sites are accessible to persons with disabilities. Reasonable accommodations for persons with disabilities can be arranged with 48 hours advance notice by calling 253-502-8468.**

## SPECIAL REMINDER TO ALL BIDDERS

HEALTH & SAFETY: Be sure to comply with all City of Tacoma health and safety requirements.

PLEASE NOTE: Be sure you have complied with all specifications and requirements and have signed all required documents.

YOUR ATTENTION IS PARTICULARLY CALLED to the following forms, which must be executed in full and submitted with your bid response:

- A. BID PROPOSAL: The unit prices bid must be shown in the space provided. Check your computations for omissions and errors.
- B. SIGNATURE PAGE: To be filled in and executed by a duly authorized officer or representative of the bidding entity. If the bidder is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.
- C. BID BOND: The Bid Bond must be executed by the person legally authorized to sign the bid, and must be properly signed by the representatives of the surety company unless the bid is accompanied by a certified check. If Bid Bond is furnished, the form furnished by the City must be followed; no variations from the language thereof will be accepted. The amount of the Bid Bond must be not less than 5% of the total amount bid.  
  
Original bid bonds or cashier's check will be delivered to:  
City of Tacoma  
Procurement and Payables  
Tacoma Public Utilities  
3628 S. 35<sup>th</sup> Street  
Tacoma, WA 98409
- D. CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES: Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2017).
- E. STATE RESPONSIBILITY AND RECIPROCAL BID PREFERENCE INFORMATION: Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2010).
- F. INQUIRIES: Submit questions concerning this Request for Bid to Dawn Dejarlais, Senior Buyer, via email to [ddejarlais@cityoftacoma.org](mailto:ddejarlais@cityoftacoma.org). Subject line of the email to read ES23-0117F – Solid Waste Landfill Cap Repair – Flare Station – BIDDER NAME. **Questions are due no later than Monday, July 31, 2023 by 5:00 p.m.**

Questions marked confidential will not be answered or included. The City reserves the discretion to group similar questions to provide a single answer or not to respond when the requested information is confidential. The answers are not typically considered an addendum. The City will not be responsible for

unsuccessful submittal of questions. Written answers to questions will be posted in the event approximately 6 days before bid opening.

**POST AWARD FORMS EXECUTED UPON AWARD:**

- 1 CONTRACT: Must be executed by the successful bidder.
- 2 PAYMENT BOND TO THE CITY OF TACOMA: Must be executed by the successful bidder and his/her surety company.
- 3 PERFORMANCE BOND TO THE CITY OF TACOMA: Must be executed by the successful bidder and his/her surety company.
- 4 CERTIFICATE OF INSURANCE: Shall be submitted with all required endorsements.
- 5 GENERAL RELEASE.

**CODE OF ETHICS:** The successful bidder agrees that its violation of the City's Code of Ethics contained in TMC Chapter 1.46 shall constitute a breach of the contract subjecting the contract to termination.

**CITY OF TACOMA  
FINANCE/PURCHASING DIVISION  
SPECIAL NOTICE TO BIDDERS**

Public works and improvement projects for the City of Tacoma are subject to Washington state law and Tacoma Municipal Code, including, but not limited to the following:

**I. STATE OF WASHINGTON**

**A. RESPONSIBILITY CRITERIA – STATE OF WASHINGTON**

In order to be considered a responsible bidder the bidder must meet the following mandatory state responsibility criteria contained in RCW 39.04.350:

1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect **at the time of bid submittal**;
2. Have a current Washington Unified Business Identifier (UBI) number;
3. If applicable:
  - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
  - b. Have a Washington Employment Security Department number, as required in Title 50 RCW;
  - c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW and;
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).
5. Have received training on the requirements related to public works and prevailing wage under this chapter and chapter 39.12 RCW and must designate a person or persons to be trained on these requirements. The training must be provided by the department of labor and industries or by a training provider whose curriculum is approved by the department. Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt from this subsection.

**B. RECIPROCAL PREFERENCE FOR RESIDENT CONTRACTORS:**

Effective March 30, 2012, RCW 39.04.380 imposes a reciprocal preference for resident contractors. Any bid received from a non-resident contractor from a state that provides an in-state percentage bidding preference is subject application of a comparable percentage disadvantage.

A non-resident contractor from a state that provides an in-state percentage bidding preference means a contractor that:

1. Is from a state that provides a percentage bid preference to its resident contractors bidding on public works projects, and
2. Does not have a physical office located in Washington at the time of bidding on the City of Tacoma public works project.

The state of residence for a non-resident contractor is the state in which the contractor was incorporated, or if not a corporation, the state in which the contractor's business entity was formed.

The City of Tacoma will evaluate all non-resident contractors for an out of state bidder preference. If the state of the non-resident contractor provides an in state contractor preference, a comparable percentage disadvantage will be applied to the non-resident contractor's bid prior to contract award. The responsive and lowest and best responsible bidder after application of any non-resident disadvantage will be awarded the contract.

The reciprocal preference evaluation does not apply to public works procured pursuant to RCW 39.04.155, RCW 39.04.280, federally funded competitive solicitations where such agencies prohibit the application of bid preferences, or any other procurement exempt from competitive bidding.

Bidders must provide the City of Tacoma with their state of incorporation or the state in which the business entity was formed and include whether the bidder has a physical office located in Washington.

The bidder shall submit documentation demonstrating compliance with above criteria on the enclosed State Responsibility and Reciprocal Bidder Information form.

### **C. SUBCONTRACTOR RESPONSIBILITY**

1. The Contractor shall include the language of this subcontractor responsibility section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. The requirements of this section apply to all subcontractors regardless of tier.
2. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
  - a. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
  - b. Have a current Washington Unified Business Identifier (UBI) number;
  - c. If applicable, have:
    - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
    - b. A Washington Employment Security Department number, as required in Title 50 RCW;
    - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
    - d. An electrical contractor license, if required by Chapter 19.28 RCW;
    - e. An elevator contractor license, if required by Chapter 70.87 RCW and;
3. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).

## **II. CITY OF TACOMA**

### **A. SUPPLEMENTAL RESPONSIBILITY CRITERIA – CITY OF TACOMA:**

In order to be considered a responsible bidder, the prospective bidder shall have all of the following qualifications set forth in Tacoma Municipal Code 1.06.262:

1. Adequate financial resources or the ability to secure such resources;
2. The necessary experience, stability, organization and technical qualifications to perform the proposed contract;
3. The ability to comply with the required performance schedule, taking into consideration all existing business commitments;
4. A satisfactory record of performance, integrity, judgment and skills; and
5. Be otherwise qualified and eligible to receive an award under applicable laws and regulations.
  - a. Bidder Responsibility. Bidders shall not be in violation of 39.04.350 RCW Bidder Responsibility Criteria - Supplemental Criteria.

In addition to the mandatory bidder responsibility criteria listed immediately above, the City may, in addition to price, consider any or all of the following criteria contained in Tacoma Municipal Code Chapter 1.06.262 in determining bidder responsibility:

1. The ability, capacity, experience, stability, technical qualifications and skill of the respondent to perform the contract;
2. Whether the respondent can perform the contract within the time specified, without delay or interference;
3. Integrity, reputation, character, judgment, experience, and efficiency of the respondents, including past compliance with the City's Ethics Code;
4. Quality of performance of previous contracts;
5. Previous and existing compliance with laws and ordinances relating to contracts or services;
6. Sufficiency of the respondent's financial resources;
7. Quality, availability, and adaptability of the supplies, purchased services or public works to the particular use required;
8. Ability of the respondent to provide future maintenance and service on a timely basis;
9. Payment terms and prompt pay discounts;
10. The number and scope of conditions attached to the submittal;
11. Compliance with all applicable City requirements, including but not limited to the City's Ethics Code and its Equity in Contracting and Local Employment and Apprenticeship Training programs;
12. Other qualification criteria set forth in the specification or advertisement that the appropriate department or division head determines to be in the best interests of the City.

The City may require bidders to furnish information, sworn or certified to be true, to demonstrate compliance with the City responsibility criteria set forth above. If the city manager or director of utilities is not satisfied with the sufficiency of the information provided, or if the prospective respondent does not substantially meet all responsibility requirements, any submittal from such respondent must be disregarded.

## **B. ADDITIONAL SUPPLEMENTAL CRITERIA – NOT APPLICABLE**

## **C. MODIFICATIONS TO SUPPLEMENTAL CRITERIA**

Potential bidders may request modifications to the City's **supplemental criteria** by submitting a written request to the Purchasing Division via email to [bids@cityoftacoma.org](mailto:bids@cityoftacoma.org) no later than 5:00 p.m. Pacific Time, three days prior to the submittal deadline. Please include the Specification No. and Title when submitting such requests. Requests must include justification for why certain criteria should be modified. Requests received after this date and time will not be considered.

The City will respond to a timely submitted request prior to the bid opening date. Changes to the supplemental criteria, if warranted, will be issued by addendum to the solicitation documents and posted to the City's website for the attention of all prospective bidders.

## **D. DETERMINATION OF BIDDER RESPONSIBILITY**

If the City determines the bidder does not meet the criteria above and is therefore not a responsible bidder, the City shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees, the bidder may appeal the determination in a manner consistent with the City's Protest Policy. Appeals are coordinated by the Purchasing Division heard by the Procurement and Payables Division Manager for contracts less than or equal to \$500,000 and by Contracts and Awards Board for contracts greater than \$500,000.

## **PART I**

### **BID PROPOSAL AND CONTRACT FORMS**

# **BID PROPOSAL**

## **SPECIFICATION NO. ES23-0117F Solid Waste Landfill Cap Repair – Flare Station**

The undersigned hereby certifies that he/she has examined the location and construction details of work as outlined on the Plans and Specifications for Project No. ENV-02009-02 and has read and thoroughly understands the Plans and Specifications and contract governing the work embraced in this improvement and the method by which payment will be made for said work, and hereby proposes to undertake and complete the work embraced in this improvement in accordance with said Plans, Specifications and contract and at the following schedule of rates and prices:

NOTE: 1. Unit prices of all items, all extensions and total amount of bid should be shown.  
Show unit prices in figures only.

<u>ITEM NO.</u>	<u>ITEM DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
1.	Mobilization/Demobilization and General Requirements	1 Lump Sum	Lump Sum	\$_____
2.	Demolition, Excavation and Stockpiling	1 Lump Sum	Lump Sum	\$_____
3.	Placement of Geosynthetics	1 Lump Sum	Lump Sum	\$_____
4.	Placement of Cover Soil Materials	1 Lump Sum	Lump Sum	\$_____
5.	Site Restoration	1 Lump Sum	Lump Sum	\$_____

**Base Bid (Subtotal Item No. 1 through 5)** \$ \_\_\_\_\_

10.3% Sales Tax (Item No. 1 through 5) \$ \_\_\_\_\_

**Grand Total** \$ \_\_\_\_\_

## SIGNATURE PAGE

### **CITY OF TACOMA ENVIRONMENTAL SERVICES/SCIENCE AND ENGINEERING DIVISION**

All submittals must be in ink or typewritten, executed by a duly authorized officer or representative of the bidding/proposing entity, and received and time stamped as directed in the **Request for Bid page near the beginning of the specification**. If the bidder/proposer is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.

#### **REQUEST FOR BID SPECIFICATION NO. ES23-0117F Solid Waste Landfill Cap Repair – Flare Station**

The undersigned bidder/proposer hereby agrees to execute the proposed contract and furnish all materials, labor, tools, equipment and all other facilities and services in accordance with these specifications.

The bidder/proposer agrees, by submitting a bid/proposal under these specifications, that in the event any litigation should arise concerning the submission of bids/proposals or the award of contract under this specification, Request for Bids, Request for Proposals or Request for Qualifications, the venue of such action or litigation shall be in the Superior Court of the State of Washington, in and for the County of Pierce.

#### **Non-Collusion Declaration**

*The undersigned bidder/proposer hereby certifies under penalty of perjury that this bid/proposal is genuine and not a sham or collusive bid/proposal, or made in the interests or on behalf of any person or entity not herein named; and that said bidder/proposer has not directly or indirectly induced or solicited any contractor or supplier on the above work to put in a sham bid/proposal or any person or entity to refrain from submitting a bid/proposal; and that said bidder/proposer has not, in any manner, sought by collusion to secure to itself an advantage over any other contractor(s) or person(s).*

\_\_\_\_\_  
Bidder/Proposer's Registered Name

\_\_\_\_\_  
Signature of Person Authorized to Enter      Date  
into Contracts for Bidder/Proposer

\_\_\_\_\_  
Address

\_\_\_\_\_  
Printed Name and Title

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
(Area Code) Telephone Number / Fax Number

\_\_\_\_\_  
Authorized Signatory E-Mail Address

\_\_\_\_\_  
State Business License Number  
in WA, also known as UBI (Unified Business Identifier) Number

\_\_\_\_\_  
E.I.No. / Federal Social Security Number Used on Quarterly  
Federal Tax Return, U.S. Treasury Dept. Form 941

\_\_\_\_\_  
State Contractor's License Number  
(See Ch. 18.27, R.C.W.)

\_\_\_\_\_  
E-Mail Address for Communications

Addendum acknowledgement #1\_\_\_\_\_ #2\_\_\_\_\_ #3\_\_\_\_\_ #4\_\_\_\_\_ #5\_\_\_\_\_

***THIS PAGE MUST BE SIGNED AND RETURNED WITH SUBMITTAL.***

Herewith find deposit in the form of a cashier's check in the amount of \$\_\_\_\_\_ which amount is not less than 5-percent of the total bid.

SIGN HERE\_\_\_\_\_

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## BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety, are held and firmly bound unto the City of Tacoma, as Obligee, in the penal sum of \_\_\_\_\_ dollars, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for

according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_\_.

PRINCIPAL:

SURETY:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

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\_\_\_\_\_, 20\_\_\_\_\_

Received return of deposit in the sum of \$ \_\_\_\_\_

\_\_\_\_\_



City of Tacoma

## Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date (July 25, 2023), that 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

\_\_\_\_\_  
Signature of Authorized Official\*

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
City

\_\_\_\_\_  
State

*Check One:*

Individual ☐

Partnership ☐

Joint Venture ☐

Corporation ☐

State of Incorporation, or if not a corporation, the 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.*

Specification No. \_\_\_\_\_

Name of Bidder: \_\_\_\_\_

## State Responsibility and Reciprocal Bid Preference Information

Certificate of registration as a contractor  
(Must be in effect at the time of bid submittal):

Number: \_\_\_\_\_

Effective Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Current Washington Unified Business Identifier  
(UBI) Number:

Number: \_\_\_\_\_

Do you have industrial insurance (workers' compensation)  
Coverage nor your employees working in Washington?

☐ Yes      ☐ No  
☐ Not Applicable

Washington Employment Security Department Number

Number: \_\_\_\_\_

☐ Not Applicable

Washington Department of Revenue state excise tax  
Registration number:

Number: \_\_\_\_\_

☐ Not Applicable

Have you been disqualified from bidding any public  
works contracts under RCW 39.06.010 or 39.12.065(3)?

☐ Yes      ☐ No  
If yes, provide an explanation of your  
disqualification on a separate page.

Do you have a physical office located in the state of  
Washington?

☐ Yes      ☐ No

If incorporated, in what state were you incorporated?

State: \_\_\_\_\_ ☐ Not Incorporated

If not incorporated, in what state was your business  
entity formed?

State: \_\_\_\_\_

Have you completed the training required by RCW  
39.04.350, or are you on the list of exempt businesses  
maintained by the Department of Labor and Industries?

☐ Yes      ☐ No

## CONTRACT

Resolution No. [#####]

Contract No. [#####]

This Contract is made and entered into effective as of [Month] [Day], [Year] ("Effective Date") by and between the City of Tacoma, a Municipal Corporation of the State of Washington ("City"), and [supplier name as it appears in Ariba, including dbas or trade names] ("Contractor").

That in consideration of the mutual promises and obligations hereinafter set forth the Parties hereto agree as follows:

- I. Contractor shall fully execute and diligently and completely perform all work and provide all services and deliverables described herein and in the items listed below each of which are fully incorporated herein and which collectively are referred to as "Contract Documents":

---

  1. Specification No. ES23-0117F Solid Waste Landfill Cap Repair – Flare Station together with all authorized addenda.
  2. Contractor's submittal [or specifically described portions thereof] dated [Enter Submittal Date] submitted in response to Specification No. ES23-0117F Solid Waste Landfill Cap Repair – Flare Station.
  3. Describe with specific detail and list separately any other documents that will make up the contract (fee schedule, work schedule, authorized personnel, etc.) or any other additional items mutually intended to be binding upon the parties.

---
- II. If federal funds will be used to fund, pay or reimburse all or a portion of the services or deliverables provided under the Contract, the terms and conditions set forth at Appendix A are incorporated into and made part of this Contract and CONTRACTOR will comply with all applicable provisions of Appendix A and with all applicable federal laws, regulations, executive orders, policies, procedures, and directives in the performance of this Contract.  
  
If CONTRACTOR's receipt of federal funds under this Contract is as a sub-recipient, a fully completed Appendix B, "Sub-recipient Information and Requirements" is incorporated into and made part of this Contract.
- III. In the event of a conflict or inconsistency between the terms and conditions contained in this document entitled Contract and any terms and conditions contained the above referenced Contract Documents the following order of precedence applies with the first listed item being the most controlling and the last listed item the least controlling:
  1. Contract, inclusive of Appendices A and B.
  2. List remaining Contract Documents in applicable controlling order.
- IV. The Contract terminates on [Termination Date].
- V. The total price to be paid by City for Contractor's full and complete performance hereunder, including during any authorized renewal terms, may not exceed:  
\$[Dollar Amount], plus any applicable taxes.
- VI. Contractor agrees to accept as full payment hereunder the amounts specified herein and in Contract Documents, and the City agrees to make payments at the times and in the manner and upon the terms and conditions specified. Except as may be otherwise provided herein or in Contract Documents Contractor shall provide and bear the expense of all equipment, work and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work and providing the services and deliverables required by this Contract.
- VII. The City's preferred method of payment is by ePayables (Payment Plus), followed by credit card (aka procurement card), then Electronic Funds Transfer (EFT) by Automated Clearing House (ACH), then check or other cash equivalent. CONTRACTOR may be required to have the capability of accepting the City's ePayables or credit card methods of payment. The City, in its sole discretion, will determine the method of payment for this Contract.

- VIII. Failure by City to identify a deficiency in the insurance documentation provided by Contractor or failure of City to demand verification of coverage or compliance by Contractor with the insurance requirements contained in the Contract Documents shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- IX. Contractor shall comply with all federal, state, municipal, and/or local laws and regulations in the performance of all terms and conditions of the Contract. Contractor shall be solely responsible for all violations of the law from any cause in connection with its performance of work under the Contract.
- X. Contractor and for its heirs, executors, administrators, successors, and assigns, does hereby agree to the full performance of all the requirements contained herein and in Contract Documents.

It is further provided that no liability shall attach to City by reason of entering into this Contract, except as expressly provided herein.

DRAFT

IN WITNESS WHEREOF, the Parties hereto have accepted and executed this Contract, as of the Effective Date stated above, which shall be Effective Date for bonding purposes as applicable.

CITY OF TACOMA:  
Signature:

CONTRACTOR:  
Signature:

Name:

Name:

Title:

Title:

(City of Tacoma use only - blank lines are intentional)

Director of Finance: \_\_\_\_\_

Deputy/City Attorney (approved as to form): \_\_\_\_\_

Approved By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Approved By: \_\_\_\_\_

**APPENDIX A  
FEDERAL FUNDING**

**1. Termination for Breach**

CITY may terminate this Contract in the event of any material breach of any of the terms and conditions of this Contract if CONTRACTOR's breach continues in effect after written notice of breach and 30 days to cure such breach and fails to cure such breach.

**2. Prevailing Wages**

- A. If federal, state, local, or any applicable law requires CONTRACTOR to pay prevailing wages in connection with this Contract, and CONTRACTOR is so notified by the CITY, then CONTRACTOR shall pay applicable prevailing wages and otherwise comply with the Washington State Prevailing Wage Act (RCW 39.12) in the performance of this Contract.
- B. If applicable, a Schedule of Prevailing Wage Rates and/or the current prevailing wage determination made by the Secretary of Labor for the locality or localities where the Contract will be performed is made of part of the Contract by this reference. If prevailing wages apply to the Contract, CONTRACTOR and its subcontractors shall:
  - i. Be bound by and perform all transactions regarding the Contract relating to prevailing wages and the usual fringe benefits in compliance with the provisions of Chapter 39.12 RCW, as amended, the Washington State Prevailing Wage Act and/or the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable, including the federal requirement to pay wages not less than once a week.
  - ii. Ensure that no worker, laborer or mechanic employed in the performance of any part of the Contract shall be paid less than the prevailing rate of wage specified on that Schedule and/or specified in a wage determination made by the Secretary of Labor (unless specifically preempted by federal law, the higher of the Washington state prevailing wage or federal Davis-Bacon rate of wage must be paid.
  - iii. Immediately upon award of the Contract, contact the Department of Labor and Industries, Prevailing Wages section, Olympia, Washington and/or the federal Department of Labor, to obtain full information, forms and procedures relating to these matters. Per such procedures, a Statement of Intent to Pay Prevailing Wages and/or other or additional documentation required by applicable federal law, must be submitted by CONTRACTOR and its subcontractors to the CITY, in the manner requested by the CITY, prior to any payment by the CITY hereunder, and an Affidavit of Wages Paid and/or other or additional documentation required by federal law must be received or verified by the CITY prior to final Contract payment.

**3. COPELAND ANTI-KICKBACK ACT**

For Contracts subject to Davis Bacon Act the following clauses will be incorporated into the Contract:

- A. CONTRACTOR shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this Contract.

- B. CONTRACTOR or subcontractor shall insert in any subcontracts the clause above and such other clauses federal agencies may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these Contract clauses.
- C. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

#### **4. EQUAL EMPLOYMENT OPPORTUNITY**

During the performance of this Contract, CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. If the CONTRACTOR does over \$10,000 in business a year that is funded, paid or reimbursed with federal funds, CONTRACTOR will take specific and affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

- A. Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- B. CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- C. CONTRACTOR will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.
- D. CONTRACTOR will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- E. CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

- F. In the event of CONTRACTOR's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the CONTRACTOR may be declared ineligible for further federally funded contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- G. CONTRACTOR will include the portion of the sentence immediately preceding paragraph (A) and the provisions of paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. CONTRACTOR will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

## **5. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

- A. Overtime requirements. Neither CONTRACTOR or subcontractor contracting for any part of the Contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- B. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (3)(A) of this section the CONTRACTOR and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such CONTRACTOR and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (3)(A) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (3)(A) of this section.

- C. Withholding for unpaid wages and liquidated damages. The CITY shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the CONTRACTOR or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such CONTRACTOR or sub-contractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (3)(B) of this section.
- D. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (3)(A) through (D) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime CONTRACTOR shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (3)(A) through (D) of this section.

## **6. CLEAN AIR ACT**

- A. CONTRACTOR agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- B. CONTRACTOR agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

CONTRACTOR agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with federal funds.

## **7. FEDERAL WATER POLLUTION CONTROL ACT**

- A. CONTRACTOR agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- B. CONTRACTOR agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the appropriate federal agency.
- C. CONTRACTOR agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with federal funding.

## **8. DEBARMENT AND SUSPENSION**

- A. This Contract is a Covered Transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the CONTRACTOR is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- B. CONTRACTOR must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000,

subpart C, and must include a requirement to comply with these regulations in any lower tier Covered Transaction it enters into.

- C. This certification is a material representation of fact relied upon by the CITY. If it is later determined that the CONTRACTOR did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to CITY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- D. CONTRACTOR agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C throughout the period of this Contract and to include a provision requiring such compliance in its lower tier covered transactions.

9. **CONTRACTOR** shall be required to comply with 2 CFR part 25, and obtain a unique entity identifier and/or be registered in the federal System for Award Management as appropriate.

#### 10. **BYRD ANTI-LOBBYING AMENDMENT**

- A. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification with CITY. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the CITY.
- B. If applicable, CONTRACTOR's certification required by Appendix A to 44 CFR Part 18 contained at Appendix A-1 to this Contract is incorporated into this Contract.

#### 11. **PROCUREMENT OF RECOVERED MATERIALS**

- A. In the performance of this Contract, CONTRACTOR shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:
  - i. Competitively within a timeframe providing for compliance with the contract performance schedule;
  - ii. Meeting contract performance requirements; or
  - iii. At a reasonable price.
- B. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.
- C. CONTRACTOR also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

## APPENDIX A-1

### APPENDIX A to 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Supplier, by Contract signature, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap.38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

## APPENDIX B—Sub-recipient information and requirements

Pursuant to 2 CFR 200.332(a)(1) Federal Award Identification

<b>(i) Agency Name (must match the name associated with its unique entity identifier)</b>		<b>(ii) Unique Entity Identifier</b> <i>(i.e., DUNS)</i>	<b>City of Tacoma</b> <b>Number for This Agreement</b>
<b>(iii) Federal Award Identification Number (FAIN)</b>	<b>(iv) Federal Award Date</b>	<b>(v) Federal Period of Performance Start and End Date</b>	<b>(vi) Federal Budget Period Start and End Date</b>
<b>(vii) Amount of Federal Funds <i>Obligated</i> to the agency <i>by this action</i>:</b>  \$	<b>(viii) Total Amount of Federal Funds <i>Obligated</i> to the agency</b>		<b>(ix) Total Amount of the Federal Award <i>Committed</i> to the agency</b>  \$
<b>(x) Federal Award Project Description:</b>  CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS– City of Tacoma			
<b>(xi) Federal Awarding Agency:</b>  DEPARTMENT OF THE TREASURY	<b>Pass-Through Entity:</b>  City of Tacoma	<b>Awarding Official Name and Contact Information:</b>	
<b>(xii) Assistance Listing Number and Name (the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listing number at time of disbursement)</b>			<b>(xiii) Identification of Whether the Award is R&amp;D</b>
<b>(xiv) Indirect Cost Rate for the Federal Award</b>	<b>Award Payment Method (lump sum payment or reimbursement)</b>  REIMBURSEMENT		



## PAYMENT BOND TO THE CITY OF TACOMA

Resolution No.  
Bond No.

That we, the undersigned,

as principal, and \_\_\_\_\_  
as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of,  
\$ \_\_\_\_\_, for the payment whereof Contractor and Surety bind themselves,  
their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. \_\_\_\_\_

Specification Title: \_\_\_\_\_

Contract No. \_\_\_\_\_

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

This statutory payment bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall pay all persons in accordance with RCW 39.08, 39.12, and 60.28, including all workers, laborers, mechanics, subcontractors, and materialmen, and all person who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work, and all taxes incurred on said Contract under Titles 50 and 51 RCW and all taxes imposed on the Principal under Title 82 RCW; and if such payment 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 shall in any way affect its obligation on this bond, and waives notice of any changes, 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.

No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the City, and where required, the Contractor, in accordance with RCW 39.08.030.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.

If any claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the City as a result of such suit. Venue for any action arising out of or in connection with this bond shall be in Pierce County, WA.

Surety companies executing bonds must be authorized to transact 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. Department of the Treasury.

Resolution No.  
Bond No.  
Specification No.  
Contract No.

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

Principal: Enter Vendor Legal Name

\_\_\_\_\_

By: \_\_\_\_\_

Surety:

\_\_\_\_\_

By: \_\_\_\_\_

Agent's Name: \_\_\_\_\_

Agent's Address: \_\_\_\_\_



## PERFORMANCE BOND TO THE CITY OF TACOMA

Resolution No.  
Bond No.

That we, the undersigned,

as principal, and

as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of

\$ \_\_\_\_\_, for the payment whereof Contractor and Surety bind themselves,

their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. \_\_\_\_\_

Specification Title: \_\_\_\_\_

Contract No. \_\_\_\_\_

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

This statutory performance 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 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; and if such performance obligations have not been fulfilled, this bond shall remain in 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 increase.

If the City shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgement, shall pay all costs and attorney's fees incurred by the City in enforcement of its rights hereunder. Venue for any action arising out of in connection with this bond shall be in Pierce County, Washington.

Surety companies executing bonds must be authorized to transact 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. Department of the Treasury.

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

Principal: Enter Vendor Legal Name

\_\_\_\_\_

By: \_\_\_\_\_

Surety:

\_\_\_\_\_

By: \_\_\_\_\_

Agent's Name: \_\_\_\_\_

Agent's Address: \_\_\_\_\_

## GENERAL RELEASE TO THE CITY OF TACOMA

The undersigned, named as the contractor for \_\_\_\_\_  
between \_\_\_\_\_ and the City of Tacoma,  
dated \_\_\_\_\_, 20\_\_\_\_, hereby releases the City  
of Tacoma, its departmental officers and agents from any and all claim or  
claims whatsoever in any manner whatsoever at any time whatsoever arising  
out of and/or in connection with and/or relating to said contract, excepting only  
the equity of the undersigned in the amount now retained by the City of  
Tacoma under said contract, to-wit the sum of \$\_\_\_\_\_.

Signed at Tacoma, Washington this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Contractor

By \_\_\_\_\_

Title \_\_\_\_\_

## **P A R T   I I**

### **GENERAL CONDITIONS FOR WASHINGTON STATE FACILITY CONSTRUCTION**

<b><u>Section</u></b>	<b><u>Description</u></b>	<b><u>Page</u></b>
<b>PART 1 – GENERAL PROVISIONS</b>		
1.01	Definitions.....	3
1.02	Order of Precedence.....	4
1.03	Execution and Intent.....	5
<b>PART 2 – INSURANCE AND BONDS</b>		
2.01	Contractor's Liability Insurance.....	5
2.02	Coverage Limits.....	6
2.03	Insurance Coverage Certificates.....	6
2.04	Payment and Performance Bonds.....	6
2.05	Alternative Surety.....	7
2.06	Builder's Risk.....	7
<b>PART 3 – TIME AND SCHEDULE</b>		
3.01	Progress and Completion.....	7
3.02	Construction Schedule.....	7
3.03	Owner's Right to Suspend the Work for Convenience.....	8
3.04	Owner's Right to Stop the Work for Cause.....	9
3.05	Delay.....	9
3.06	Notice to Owner of Labor Disputes.....	10
3.07	Damages for Failure to Achieve Timely Completion.....	10
<b>PART 4 – SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS</b>		
4.01	Discrepancies and Contract Document Review.....	11
4.02	Project Record.....	11
4.03	Shop Drawings.....	12
4.04	Organization of Specifications.....	13
4.05	Ownership and Use of Drawings, Specifications & other Documents.....	13
<b>PART 5 – PERFORMANCE</b>		
5.01	Contractor Control and Supervision.....	13
5.02	Permits, Fees and Notices.....	14
5.03	Patents and Royalties.....	14
5.04	Prevailing Wages.....	15
5.05	Hours of Labor.....	15
5.06	Nondiscrimination.....	16
5.07	Safety Precautions.....	16
5.08	Operations, Material Handling, and Storage Areas.....	18
5.09	Prior Notice of Excavation.....	19
5.10	Unforeseen Physical Conditions.....	19
5.11	Protection of Existing Structures, Equipment, Vegetation, Utilities, & Improvements.....	19
5.12	Layout of Work.....	19
5.13	Material and Equipment.....	20
5.14	Availability and Use of Utility Services.....	20
5.15	Tests and Inspections.....	20
5.16	Correction of Nonconforming Work.....	21
5.17	Clean Up.....	22
5.18	Access to Work.....	22
5.19	Other Contracts.....	23
5.20	Subcontractors and Suppliers.....	23
5.21	Warranty of Construction.....	24

**PART 5 – PERFORMANCE (continued)**

5.22	Indemnification.....	25
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**PART 6 – PAYMENTS AND COMPLETION**

6.01	Contract Sum.....	25
6.02	Schedule of Values.....	25
6.03	Application for Payment.....	25
6.04	Progress Payments.....	26
6.05	Payments Withheld.....	27
6.06	Retainage and Bond Claim Rights.....	27
6.07	Substantial Completion.....	27
6.08	Prior Occupancy.....	28
6.09	Final Completion, Acceptance, and Payment.....	28

**PART 7 – CHANGES**

7.01	Change in the Work.....	28
7.02	Change in the Contract Sum.....	30
7.03	Change in the Contract Time.....	36

**PART 8 – CLAIMS AND DISPUTE RESOLUTION**

8.01	Claims Procedure.....	38
8.02	Arbitration.....	39
8.03	Claims Audits.....	40

**PART 9 – TERMINATION OF THE WORK**

9.01	Termination by Owner for Cause.....	41
9.02	Termination by Owner for Convenience.....	42

**PART 10 – MISCELLANEOUS PROVISIONS**

10.01	Governing Law.....	43
10.02	Successors and Assigns.....	43
10.03	Meaning of Words.....	43
10.04	Rights and Remedies.....	44
10.05	Contractor Registration.....	44
10.06	Time Computations.....	44
10.07	Records Retention.....	44
10.08	Third-Party Agreements.....	44
10.09	Antitrust Assignments.....	44
10.10	Headings and Captions.....	44

## PART 1 – GENERAL PROVISIONS

### 1.01 DEFINITIONS

- A. "Application for Payment" means a written request submitted by Contractor to A/E for payment of Work completed in accordance with the Contract Documents and approved Schedule of Values, supported by such substantiating data as Owner or A/E may require.
- B. "Architect," "Engineer," or "A/E" means a person or entity lawfully entitled to practice architecture or engineering, representing Owner within the limits of its delegated authority.
- C. "Change Order" means a written instrument signed by Owner and Contractor stating their agreement upon all of the following: (1) a change in the Work; (2) the amount of the adjustment in the Contract Sum, if any, and (3) the extent of the adjustment in the Contract Time, if any.
- D. "Claim" means Contractor's exclusive remedy for resolving disputes with Owner regarding the terms of a Change Order or a request for equitable adjustment, as more fully set forth in Part 8.
- E. "Contract Award Amount" is the sum of the Base Bid and any accepted Alternates.
- F. "Contract Documents" means the Advertisement for Bids, Instructions for Bidders, completed Bid Form, General Conditions, Modifications to the General Conditions, Supplemental Conditions, Public Works Contract, other Special Forms, Drawings and Specifications, and all addenda and modifications thereof.
- G. "Contract Sum" is the total amount payable by Owner to Contractor, for performance of the Work in accordance with the Contract Documents, including all taxes imposed by law and properly chargeable to the Work, except Washington State sales tax.
- H. "Contract Time" is the number of calendar days allotted in the Contract Documents for achieving Substantial Completion of the Work.
- I. "Contractor" means the person or entity who has agreed with Owner to perform the Work in accordance with the Contract Documents.
- J. "Day(s):" Unless otherwise specified, day(s) shall mean calendar day(s)."
- K. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, and may include plans, elevations, sections, details, schedules, and diagrams.
- L. "Final Acceptance" means the written acceptance issued to Contractor by Owner after Contractor has completed the requirements of the Contract Documents, as more fully set forth in Section 6.09 B.
- M. "Final Completion" means that the Work is fully and finally complete in accordance with the Contract Documents, as more fully set forth in Section 6.09 A.
- N. "Force Majeure" means those acts entitling Contractor to request an equitable adjustment in the Contract Time, as more fully set forth in paragraph 3.05A.
- O. "Notice" means a written notice which has been delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail, to the last business address known to the party giving notice.

- P. "Notice to Proceed" means a notice from Owner to Contractor that defines the date on which the Contract Time begins to run.
- Q. "Owner" means the state agency, institution, or its authorized representative with the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents and make related determinations and findings.
- R. "Person" means a corporation, partnership, business association of any kind, trust, company, or individual.
- S. "Prior Occupancy" means Owner's use of all or parts of the Project before Substantial Completion, as more fully set forth in Section 6.08 A.
- T. "Progress Schedule" means a schedule of the Work, in a form satisfactory to Owner, as further set forth in Section 3.02.
- U. "Project" means the total construction of which the Work performed in accordance with the Contract Documents may be the whole or a part and which may include construction by Owner or by separate contractors.
- V. "Project Record" means the separate set of Drawings and Specifications as further set forth in paragraph 4.02A.
- W. "Schedule of Values" means a written breakdown allocating the total Contract Sum to each principal category of Work, in such detail as requested by Owner.
- X. "Specifications" are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- Y. "Subcontract" means a contract entered into by Subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind for or in connection with the Work.
- Z. "Subcontractor" means any person, other than Contractor, who agrees to furnish or furnishes any supplies, materials, equipment, or services of any kind in connection with the Work.
- AA. "Substantial Completion" means that stage in the progress of the Work when the construction is sufficiently complete, as more fully set forth in Section 6.07.
- AB. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

## **1.02 ORDER OF PRECEDENCE**

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documents precedence in the following order:

1. Signed Public Works Contract, including any Change Orders.
2. Supplemental Conditions.
3. Modifications to the General Conditions.
4. General Conditions.

5. Specifications. Provisions in Division 1 shall take precedence over provisions of any other Division.
6. Drawings. In case of conflict within the Drawings, large scale drawings shall take precedence over small scale drawings.
7. Signed and Completed Bid Form.
8. Instructions to Bidders.
9. Advertisement for Bids.

### **1.03 EXECUTION AND INTENT**

Contractor Representations: Contractor makes the following representations to Owner:

1. Contract Sum reasonable: The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;
2. Contractor familiar with project: Contractor has carefully reviewed the Contract Documents, visited and examined the Project site, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof;
3. Contractor financially capable: Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform Contractor's obligations required by the Contract Documents; and
4. Contractor can complete Work: Contractor is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform the obligations required by the Contract Documents and has sufficient experience and competence to do so.

## **PART 2 – INSURANCE AND BONDS**

### **2.01 CONTRACTOR'S LIABILITY INSURANCE**

General insurance requirements: Prior to commencement of the Work, Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Owner that such insurance has been procured. Review of the Contractor's insurance by Owner shall not relieve or decrease the liability of Contractor. Companies writing the insurance to be obtained by this part shall be licensed to do business under Chapter 48 RCW or comply with the Surplus Lines Law of the State of Washington. Contractor shall include in its bid the cost of all insurance and bond costs required to complete the base bid work and accepted alternates. Insurance carriers providing insurance in accordance with the Contract Documents shall be acceptable to Owner, and its A.M. Best rating shall be indicated on the insurance certificates.

- A. Term of insurance coverage: Contractor shall maintain the following insurance coverage during the Work and for one year after Final Acceptance. Contractor shall also maintain the following insurance coverage during the performance of any corrective Work required by Section 5.16.

1. General Liability Insurance: Commercial General Liability (CGL) on an Occurrence Form. Coverage shall include, but not be limited to:
    - a. Completed operations/products liability;
    - b. Explosion, collapse, and underground; and
    - c. Employer's liability coverage.
  2. Automobile Liability Insurance: Automobile liability
- B. Industrial Insurance compliance: Contractor shall comply with the Washington State Industrial Insurance Act and, if applicable, the Federal Longshoremen's and Harbor Workers' Act and the Jones Act.
- C. Insurance to protect for the following: All insurance coverages shall protect against claims for damages for personal and bodily injury or death, as well as claims for property damage, which may arise from operations in connection with the Work whether such operations are by Contractor or any Subcontractor.
- D. Owner as Additional Insured: All insurance coverages shall be endorsed to include Owner as an additional named insured for Work performed in accordance with the Contract Documents, and all insurance certificates shall evidence the Owner as an additional insured.

## **2.02 COVERAGE LIMITS**

Insurance amounts: The coverage limits shall be as follows:

- A. Limits of Liability shall not be less than \$1,000,000 Combined Single Limit for Bodily Injury and Property Damage (other than Automobile Liability) Each Occurrence; Personal Injury and Advertising Liability Each Occurrence.
- B. \$2,000,000 Combined Single Limit Annual General Aggregate.
- C. \$2,000,000 Annual Aggregate for Products and Completed Operations Liability.
- D. \$1,000,000 Combined Single Limit for Automobile Bodily Injury and Property Damage Liability, Each Accident or Loss.

## **2.03 INSURANCE COVERAGE CERTIFICATES**

- A. Certificate required: Prior to commencement of the Work, Contractor shall furnish to Owner a completed certificate of insurance coverage.
- B. List Project info: All insurance certificates shall name Owner's Project number and Project title.
- C. Cancellation provisions: All insurance certificates shall specifically require 45 Days prior notice to Owner of cancellation or any material change, except 30 Days for surplus line insurance.

## **2.04 PAYMENT AND PERFORMANCE BONDS**

Conditions for bonds: Payment and performance bonds for 100% of the Contract Award Amount, plus state sales tax, shall be furnished for the Work, using the Payment Bond and Performance Bond form published by and available from the American Institute of Architects (AIA) – form A312. Prior to execution of a Change Order that, cumulatively with previous Change Orders, increases the Contract Award Amount by 15% or more, the Contractor shall provide either new payment and performance bonds for the

revised Contract Sum, or riders to the existing payment and performance bonds increasing the amount of the bonds. The Contractor shall likewise provide additional bonds or riders when subsequent Change Orders increase the Contract Sum by 15% or more. No payment or performance bond is required if the Contract Sum is \$35,000 or less and Contractor agrees that Owner may, in lieu of the bond, retain 50% of the Contract Sum for the period allowed by RCW 39.08.010.

## **2.05 ALTERNATIVE SURETY**

When alternative surety required: Contractor shall promptly furnish payment and performance bonds from an alternative surety as required to protect Owner and persons supplying labor or materials required by the Contract Documents if:

- A. Owner has a reasonable objection to the surety; or
- B. Any surety fails to furnish reports on its financial condition if required by Owner.

## **2.06 BUILDER'S RISK**

- A. Contractor to buy Property Insurance: Contractor shall purchase and maintain property insurance in the amount of the Contract Sum including all Change Orders for the Work on a replacement cost basis until Substantial Completion. For projects not involving New Building Construction, "Installation Floater" is an acceptable substitute for the Builder's Risk Insurance. The insurance shall cover the interest of Owner, Contractor, and any Subcontractors, as their interests may appear.
- B. Losses covered: Contractor property insurance shall be placed on an "all risk" basis and insure against the perils of fire and extended coverage and physical loss or damage including theft, vandalism, malicious mischief, collapse, false work, temporary buildings, debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for A/E's services and expenses required as a result of an insured loss.
- C. Waiver of subrogation rights: Owner and Contractor waive all subrogation rights against each other, any Subcontractors, A/E, A/E's subconsultants, separate contractors described in Section 5.20, if any, and any of their subcontractors, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by Owner as fiduciary. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

# **PART 3 – TIME AND SCHEDULE**

## **3.01 PROGRESS AND COMPLETION**

Contractor to meet schedule: Contractor shall diligently prosecute the Work, with adequate forces, achieve Substantial Completion within the Contract Time, and achieve Final Completion within a reasonable period thereafter.

## **3.02 CONSTRUCTION SCHEDULE**

- A. Preliminary Progress Schedule: Unless otherwise provided in Division 1, Contractor shall, within 14 Days after issuance of the Notice to Proceed, submit a preliminary Progress Schedule. The Progress Schedule shall show the sequence in which Contractor proposes to perform the Work,

and the dates on which Contractor plans to start and finish major portions of the Work, including dates for shop drawings and other submittals, and for acquiring materials and equipment.

- B. Form of Progress Schedule: Unless otherwise provided in Division 1, the Progress Schedule shall be in the form of a bar chart, or a critical path method analysis, as specified by Owner. The preliminary Progress Schedule may be general, showing the major portions of the Work, with a more detailed Progress Schedule submitted as directed by Owner.
- C. Owner comments on Progress Schedule: Owner shall return comments on the preliminary Progress Schedule to Contractor within 14 Days of receipt. Review by Owner of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Owner may withhold a portion of progress payments until a Progress Schedule has been submitted which meets the requirements of this section.
- D. Monthly updates and compliance with Progress Schedule: Contractor shall utilize and comply with the Progress Schedule. On a monthly basis, or as otherwise directed by Owner, Contractor shall submit an updated Progress Schedule at its own expense to Owner indicating actual progress. If, in the opinion of Owner, Contractor is not in conformance with the Progress Schedule for reasons other than acts of Force Majeure as identified in Section 3.05, Contractor shall take such steps as are necessary to bring the actual completion dates of its work activities into conformance with the Progress Schedule, and if directed by Owner, Contractor shall submit a corrective action plan or revise the Progress Schedule to reconcile with the actual progress of the Work.
- E. Contractor to notify Owner of delays: Contractor shall promptly notify Owner in writing of any actual or anticipated event which is delaying or could delay achievement of any milestone or performance of any critical path activity of the Work. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Progress Schedule, and the action being or to be taken to correct the problem. Provision of such notice does not relieve Contractor of its obligation to complete the Work within the Contract Time.

### **3.03 OWNER'S RIGHT TO SUSPEND THE WORK FOR CONVENIENCE**

- A. Owner may suspend Work: Owner may, at its sole discretion, order Contractor, in writing, to suspend all or any part of the Work for up to 90 Days, or for such longer period as mutually agreed.
- B. Compliance with suspension; Owner's options: Upon receipt of a written notice suspending the Work, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of cost of performance directly attributable to such suspension. Within a period up to 90 Days after the notice is delivered to Contractor, or within any extension of that period to which the parties shall have agreed, Owner shall either:
  - 1. Cancel the written notice suspending the Work; or
  - 2. Terminate the Work covered by the notice as provided in the termination provisions of Part 9.
- C. Resumption of Work: If a written notice suspending the Work is cancelled or the period of the notice or any extension thereof expires, Contractor shall resume Work.
- D. Equitable Adjustment for suspensions: Contractor shall be entitled to an equitable adjustment in the Contract Time, or Contract Sum, or both, for increases in the time or cost of performance

directly attributable to such suspension, provided Contractor complies with all requirements set forth in Part 7.

**3.04 OWNER'S RIGHT TO STOP THE WORK FOR CAUSE**

- A. Owner may stop Work for Contractor's failure to perform: If Contractor fails or refuses to perform its obligations in accordance with the Contract Documents, Owner may order Contractor, in writing, to stop the Work, or any portion thereof, until satisfactory corrective action has been taken.
- B. No Equitable Adjustment for Contractor's failure to perform: Contractor shall not be entitled to an equitable adjustment in the Contract Time or Contract Sum for any increased cost or time of performance attributable to Contractor's failure or refusal to perform or from any reasonable remedial action taken by Owner based upon such failure.

**3.05 DELAY**

- A. Force Majeure actions not a default; Force Majeure defined: Any delay in or failure of performance by Owner or Contractor, other than the payment of money, shall not constitute a default hereunder if and to the extent the cause for such delay or failure of performance was unforeseeable and beyond the control of the party ("Force Majeure"). Acts of Force Majeure include, but are not limited to:
1. Acts of God or the public enemy;
  2. Acts or omissions of any government entity;
  3. Fire or other casualty for which Contractor is not responsible;
  4. Quarantine or epidemic;
  5. Strike or defensive lockout;
  6. Unusually severe weather conditions which could not have been reasonably anticipated; and
  7. Unusual delay in receipt of supplies or products which were ordered and expedited and for which no substitute reasonably acceptable to Owner was available.
- B. Contract Time adjustment for Force Majeure: Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to an act of Force Majeure, provided it makes a request for equitable adjustment according to Section 7.03. Contractor shall not be entitled to an adjustment in the Contract Sum resulting from an act of Force Majeure.
- C. Contract Time or Contract Sum adjustment if Owner at fault: Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Owner, provided the Contractor makes a request according to Sections 7.02 and 7.03.
- D. No Contract Time or Contract Sum adjustment if Contractor at fault: Contractor shall not be entitled to an adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by Contractor or anyone for whose acts Contractor is responsible.

- E. Contract Time adjustment only for concurrent fault: To the extent any delay or failure of performance was concurrently caused by the Owner and Contractor, Contractor shall be entitled to an adjustment in the Contract Time for that portion of the delay or failure of performance that was concurrently caused, provided it makes a request for equitable adjustment according to Section 7.03, but shall not be entitled to an adjustment in Contract Sum.
- F. Contractor to mitigate delay impacts: Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by an act of Force Majeure or otherwise.

**3.06 NOTICE TO OWNER OF LABOR DISPUTES**

- A. Contractor to notify Owner of labor disputes: If Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay timely performance in accordance with the Contract Documents, Contractor shall immediately give notice, including all relevant information, to Owner.
- B. Pass through notification provisions to Subcontractors: Contractor agrees to insert a provision in its Subcontracts and to require insertion in all sub-subcontracts, that in the event timely performance of any such contract is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor or Sub-subcontractor shall immediately notify the next higher tier Subcontractor or Contractor, as the case may be, of all relevant information concerning the dispute.

**3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION**

A. Liquidated Damages

- 1. Reason for Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. However, it would be difficult if not impossible to determine the exact amount of such damages. Consequently, provisions for liquidated damages are included in the Contract Documents.
- 2. Calculation of Liquidated Damages amount: The liquidated damage amounts set forth in the Contract Documents will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and deducted from periodic payments to the Contractor.
- 3. Contractor responsible even if Liquidated Damages assessed: Assessment of liquidated damages shall not release Contractor from any further obligations or liabilities pursuant to the Contract Documents.

B. Actual Damages

Calculation of Actual Damages: Actual damages will be assessed for failure to achieve Final Completion within the time provided. Actual damages will be calculated on the basis of direct architectural, administrative, and other related costs attributable to the Project from the date when Final Completion should have been achieved, based on the date Substantial Completion is actually achieved, to the date Final Completion is actually achieved. Owner may offset these costs against any payment due Contractor.

## PART 4 – SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS

### 4.01 DISCREPANCIES AND CONTRACT DOCUMENT REVIEW

- A. Specifications and Drawings are basis of the Work: The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Drawings, Specifications, and other provisions of the Contract Documents.
- B. Parts of the Contract Documents are complementary: The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.
- C. Contractor to report discrepancies in Contract Documents: Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Owner. If, during the performance of the Work, Contractor finds a conflict, error, inconsistency, or omission in the Contract Documents, it shall promptly and before proceeding with the Work affected thereby, report such conflict, error, inconsistency, or omission to A/E in writing.
- D. Contractor knowledge of discrepancy in documents – responsibility: Contractor shall do no Work without applicable Drawings, Specifications, or written modifications, or Shop Drawings where required, unless instructed to do so in writing by Owner. If Contractor performs any construction activity, and it knows or reasonably should have known that any of the Contract Documents contain a conflict, error, inconsistency, or omission, Contractor shall be responsible for the performance and shall bear the cost for its correction.
- E. Contractor to perform Work implied by Contract Documents: Contractor shall provide any work or materials the provision of which is clearly implied and is within the scope of the Contract Documents even if the Contract Documents do not mention them specifically.
- F. Interpretation questions referred to A/E: Questions regarding interpretation of the requirements of the Contract Documents shall be referred to the A/E.

### 4.02 PROJECT RECORD

- A. Contractor to maintain Project Record Drawings and Specifications: Contractor shall legibly mark in ink on a separate set of the Drawings and Specifications all actual construction, including depths of foundations, horizontal and vertical locations of internal and underground utilities and appurtenances referenced to permanent visible and accessible surface improvements, field changes of dimensions and details, actual suppliers, manufacturers and trade names, models of installed equipment, and Change Order Proposals (COP). This separate set of Drawings and Specifications shall be the "Project Record."
- B. Update Project Record weekly and keep on site: The Project Record shall be maintained on the project site throughout the construction and shall be clearly labeled "PROJECT RECORD." The Project Record shall be updated at least weekly noting all changes and shall be available to Owner at all times.
- C. Final Project Record to A/E before Final Acceptance: Contractor shall submit the completed and finalized Project Record to A/E prior to Final Acceptance.

**4.03    SHOP DRAWINGS**

- A.    Definition of Shop Drawings: “Shop Drawings” means documents and other information required to be submitted to A/E by Contractor pursuant to the Contract Documents, showing in detail: the proposed fabrication and assembly of structural elements; and the installation (i.e. form, fit, and attachment details) of materials and equipment. Shop Drawings include, but are not limited to, drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials furnished by Contractor to explain in detail specific portions of the Work required by the Contract Documents. For materials and equipment to be incorporated into the Work, Contractor submittal shall include the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the item. When directed, Contractor shall submit all samples at its own expense. Owner may duplicate, use, and disclose Shop Drawings provided in accordance with the Contract Documents.
- B.    Approval of Shop Drawings by Contractor and A/E: Contractor shall coordinate all Shop Drawings, and review them for accuracy, completeness, and compliance with the Contract Documents and shall indicate its approval thereon as evidence of such coordination and review. Where required by law, Shop Drawings shall be stamped by an appropriate professional licensed by the state of Washington. Shop Drawings submitted to A/E without evidence of Contractor's approval shall be returned for resubmission. Contractor shall review, approve, and submit Shop Drawings with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Owner or separate contractors. Contractor's submittal schedule shall allow a reasonable time for A/E review. A/E will review, approve, or take other appropriate action on the Shop Drawings. Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings until the respective submittal has been reviewed and the A/E has approved or taken other appropriate action. Owner and A/E shall respond to Shop Drawing submittals with reasonable promptness. Any Work by Contractor shall be in accordance with reviewed Shop Drawings. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.
- C.    Contractor not relieved of responsibility when Shop Drawings approved: Approval, or other appropriate action with regard to Shop Drawings, by Owner or A/E shall not relieve Contractor of responsibility for any errors or omissions in such Shop Drawings, nor from responsibility for compliance with the requirements of the Contract Documents. Unless specified in the Contract Documents, review by Owner or A/E shall not constitute an approval of the safety precautions employed by Contractor during construction, or constitute an approval of Contractor's means or methods of construction. If Contractor fails to obtain approval before installation and the item or work is subsequently rejected, Contractor shall be responsible for all costs of correction.
- D.    Variations between Shop Drawings and Contract Documents: If Shop Drawings show variations from the requirements of the Contract Documents, Contractor shall describe such variations in writing, separate from the Shop Drawings, at the time it submits the Shop Drawings containing such variations. If A/E approves any such variation, an appropriate Change Order will be issued. If the variation is minor and does not involve an adjustment in the Contract Sum or Contract Time, a Change Order need not be issued; however, the modification shall be recorded upon the Project Record.
- E.    Contractor to submit 5 copies of Shop Drawings: Unless otherwise provided in Division 1, Contractor shall submit to A/E for approval 5 copies of all Shop Drawings. Unless otherwise indicated, 3 sets of all Shop Drawings shall be retained by A/E and 2 sets shall be returned to Contractor.

#### 4.04 ORGANIZATION OF SPECIFICATIONS

Specification organization by trade: Specifications are prepared in sections which conform generally with trade practices. These sections are for Owner and Contractor convenience and shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by any trade.

#### 4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS

- A. A/E, not Contractor, owns Copyright of Drawings and Specifications: The Drawings, Specifications, and other documents prepared by A/E are instruments of A/E's service through which the Work to be executed by Contractor is described. Neither Contractor nor any Subcontractor shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by A/E, and A/E shall be deemed the author of them and will, along with any rights of Owner, retain all common law, statutory, and other reserved rights, in addition to the copyright. All copies of these documents, except Contractor's set, shall be returned or suitably accounted for to A/E, on request, upon completion of the Work.
- B. Drawings and Specifications to be used only for this Project: The Drawings, Specifications, and other documents prepared by the A/E, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner and A/E. Contractor and Subcontractors are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other documents prepared by A/E appropriate to and for use in the execution of their Work.
- C. Shop Drawing license granted to Owner: Contractor and all Subcontractors grant a non-exclusive license to Owner, without additional cost or royalty, to use for its own purposes (including reproduction) all Shop Drawings, together with the information and diagrams contained therein, prepared by Contractor or any Subcontractor. In providing Shop Drawings, Contractor and all Subcontractors warrant that they have authority to grant to Owner a license to use the Shop Drawings, and that such license is not in violation of any copyright or other intellectual property right. Contractor agrees to defend and indemnify Owner pursuant to the indemnity provisions in Section 5.03 and 5.22 from any violations of copyright or other intellectual property rights arising out of Owner's use of the Shop Drawings hereunder, or to secure for Owner, at Contractor's own cost, licenses in conformity with this section.
- D. Shop Drawings to be used only for this Project: The Shop Drawings and other submittals prepared by Contractor, Subcontractors of any tier, or its or their equipment or material suppliers, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor of any tier, or material or equipment supplier, on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner. The Contractor, Subcontractors of any tier, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Shop Drawings and other submittals appropriate to and for use in the execution of their Work under the Contract Documents.

### PART 5 – PERFORMANCE

#### 5.01 CONTRACTOR CONTROL AND SUPERVISION

- A. Contractor responsible for Means and Methods of construction: Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the Work in a skillful manner. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, unless the

Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Owner.

- B. Competent Superintendent required: Performance of the Work shall be directly supervised by a competent superintendent who has authority to act for Contractor. The superintendent must be satisfactory to the Owner and shall not be changed without the prior written consent of Owner. Owner may require Contractor to remove the superintendent from the Work or Project site, if Owner reasonably deems the superintendent incompetent, careless, or otherwise objectionable, provided Owner has first notified Contractor in writing and allowed a reasonable period for transition.
- C. Contractor responsible for acts and omissions of self and agents: Contractor shall be responsible to Owner for acts and omissions of Contractor, Subcontractors, and their employees and agents.
- D. Contractor to employ competent and disciplined workforce: Contractor shall enforce strict discipline and good order among all of the Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Contractor's employees shall at all times conduct business in a manner which assures fair, equal, and nondiscriminatory treatment of all persons. Owner may, by written notice, request Contractor to remove from the Work or Project site any employee Owner reasonably deems incompetent, careless, or otherwise objectionable.
- E. Contractor to keep project documents on site: Contractor shall keep on the Project site a copy of the Drawings, Specifications, addenda, reviewed Shop Drawings, and permits and permit drawings.
- F. Contractor to comply with ethical standards: Contractor shall ensure that its owner(s) and employees, and those of its Subcontractors, comply with the Ethics in Public Service Act RCW 42.52, which, among other things, prohibits state employees from having an economic interest in any public works contract that was made by, or supervised by, that employee. Contractor shall remove, at its sole cost and expense, any of its, or its Subcontractors' employees, if they are in violation of this act.

## **5.02 PERMITS, FEES, AND NOTICES**

- A. Contractor to obtain and pay for permits: Unless otherwise provided in the Contract Documents, Contractor shall pay for and obtain all permits, licenses, and inspections necessary for proper execution and completion of the Work. Prior to Final Acceptance, the approved, signed permits shall be delivered to Owner.
- B. Allowances for permit fees: If allowances for permits or utility fees are called for in the Contract Documents and set forth in Contractor's bid, and the actual costs of those permits or fees differ from the allowances in the Contract Documents, the difference shall be adjusted by Change Order.
- C. Contractor to comply with all applicable laws: Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations, and lawful orders of public authorities applicable to performance of the Work.

## **5.03 PATENTS AND ROYALTIES**

Payment, indemnification, and notice: Contractor is responsible for, and shall pay, all royalties and license fees. Contractor shall defend, indemnify, and hold Owner harmless from any costs, expenses, and liabilities arising out of the infringement by Contractor of any patent, copyright, or other intellectual property right used in the Work; however, provided that Contractor gives prompt notice, Contractor shall not be responsible for such defense or indemnity when a particular design, process, or product of a

particular manufacturer or manufacturers is required by the Contract Documents. If Contractor has reason to believe that use of the required design, process, or product constitutes an infringement of a patent or copyright, it shall promptly notify Owner of such potential infringement.

#### **5.04 PREVAILING WAGES**

- A. Contractor to pay Prevailing Wages: Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of the Department of Labor and Industries. The schedule of prevailing wage rates for the locality or localities of the Work, is determined by the Industrial Statistician of the Department of Labor and Industries. It is the Contractor's responsibility to verify the applicable prevailing wage rate.
- B. Statement of Intent to Pay Prevailing Wages: Before payment is made by the Owner to the Contractor for any work performed by the Contractor and subcontractors whose work is included in the application for payment, the Contractor shall submit, or shall have previously submitted to the Owner for the Project, a Statement of Intent to Pay Prevailing Wages, approved by the Department of Labor and Industries, certifying the rate of hourly wage paid and to be paid each classification of laborers, workers, or mechanics employed upon the Work by Contractor and Subcontractors. Such rates of hourly wage shall not be less than the prevailing wage rate.
- C. Affidavit of Wages Paid: Prior to release of retainage, the Contractor shall submit to the Owner an Affidavit of Wages Paid, approved by the Department of Labor and Industries, for the Contractor and every subcontractor, of any tier, that performed work on the Project.
- D. Disputes: Disputes regarding prevailing wage rates shall be referred for arbitration to the Director of the Department of Labor and Industries. The arbitration decision shall be final and conclusive and binding on all parties involved in the dispute as provided for by RCW 39.12.060.
- E. Statement with pay application; Post Statements of Intent at job site: Each Application for Payment submitted by Contractor shall state that prevailing wages have been paid in accordance with the prefilled statement(s) of intent, as approved. Copies of the approved intent statement(s) shall be posted on the job site with the address and telephone number of the Industrial Statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.
- F. Contractor to pay for Statements of Intent and Affidavits: In compliance with chapter 296-127 WAC, Contractor shall pay to the Department of Labor and Industries the currently established fee(s) for each statement of intent and/or affidavit of wages paid submitted to the Department of Labor and Industries for certification.
- G. Certified Payrolls: Consistent with WAC 296-127-320, the Contractor and any subcontractor shall submit a certified copy of payroll records if requested.

#### **5.05 HOURS OF LABOR**

- A. Overtime: Contractor shall comply with all applicable provisions of RCW 49.28 and they are incorporated herein by reference. Pursuant to that statute, no laborer, worker, or mechanic employed by Contractor, any Subcontractor, or any other person performing or contracting to do the whole or any part of the Work, shall be permitted or required to work more than eight hours in any one calendar day, provided, that in cases of extraordinary emergency, such as danger to life or property, the hours of work may be extended, but in such cases the rate of pay for time employed in excess of eight hours of each calendar day shall be not less than one and one-half times the rate allowed for this same amount of time during eight hours of service.

- B. 4-10 Agreements: Notwithstanding the preceding paragraph, RCW 49.28 permits a contractor or subcontractor in any public works contract subject to those provisions, to enter into an agreement with its employees in which the employees work up to ten hours in a calendar day. No such agreement may provide that the employees work ten-hour days for more than four calendar days a week. Any such agreement is subject to approval by the employees. The overtime provisions of RCW 49.28 shall not apply to the hours, up to forty hours per week, worked pursuant to any such agreement.

#### 5.06 **NONDISCRIMINATION**

- A. Discrimination prohibited by applicable laws: Discrimination in all phases of employment is prohibited by, among other laws and regulations, Title VII of the Civil Rights Act of 1964, the Vietnam Era Veterans Readjustment Act of 1974, Sections 503 and 504 of the Vocational Rehabilitation Act of 1973, the Equal Employment Act of 1972, the Age Discrimination Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, Presidential Executive Order 11246, Executive Order 11375, the Washington State Law Against Discrimination, RCW 49.60, and Gubernatorial Executive Order 85-09. These laws and regulations establish minimum requirements for affirmative action and fair employment practices which Contractor must meet.
- B. During performance of the Work:
1. Protected Classes: Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, marital status, or the presence of any physical, sensory, or mental disability, Vietnam era veteran status, or disabled veteran status, nor commit any other unfair practices as defined in RCW 49.60.
  2. Advertisements to state nondiscrimination: Contractor shall, in all solicitations or advertisements for employees placed by or for it, state that all qualified applicants will be considered for employment, without regard to race, creed, color, national origin, sex, age, marital status, or the presence of any physical, sensory, or mental disability.
  3. Contractor to notify unions and others of nondiscrimination: Contractor shall send to each labor union, employment agency, or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union, employment agency, or workers' representative of Contractor's obligations according to the Contract Documents and RCW 49.60.
  4. Owner and State access to Contractor records: Contractor shall permit access to its books, records, and accounts, and to its premises by Owner, and by the Washington State Human Rights Commission, for the purpose of investigation to ascertain compliance with this section of the Contract Documents.
  5. Pass through provisions to Subcontractors: Contractor shall include the provisions of this section in every Subcontract.

#### 5.07 **SAFETY PRECAUTIONS**

- A. Contractor responsible for safety: Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.
- B. Contractor safety responsibilities: In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations,

and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.

- C. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Owner. Owner shall, at all times, have a right of access to all records of exposure.
- D. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information. At a minimum, Contractor shall inform persons working on the Project site of:
    - a. WAC: The requirements of chapter 296-62 WAC, General Occupational Health Standards;
    - b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present; and
    - c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by chapter 296-62 WAC.
  2. Training. At a minimum, Contractor shall provide training for persons working on the Project site which includes:
    - a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
    - b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area;
    - c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and
    - d. Hazard communications program: The details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.
- E. Hazardous, toxic or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:
1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or

harmful by any federal, state or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored more than 90 Days on the Project site.

2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.
- F. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- G. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- H. No duty of safety by Owner or A/E: Nothing provided in this section shall be construed as imposing any duty upon Owner or A/E with regard to, or as constituting any express or implied assumption of control or responsibility over, Project site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

#### **5.08 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS**

- A. Limited storage areas: Contractor shall confine all operations, including storage of materials, to Owner-approved areas.
- B. Temporary buildings and utilities at Contractor expense: Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Owner and without expense to Owner. The temporary buildings and utilities shall be removed by Contractor at its expense upon completion of the Work.
- C. Roads and vehicle loads: Contractor shall use only established roadways or temporary roadways authorized by Owner. When materials are transported in prosecuting the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.
- D. Ownership and reporting by Contractor of demolished materials: Ownership and control of all materials or facility components to be demolished or removed from the Project site by Contractor shall immediately vest in Contractor upon severance of the component from the facility or severance of the material from the Project site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal. Contractor shall provide Owner with a copy of all manifests and receipts evidencing proper disposal when required by Owner or applicable law.
- E. Contractor responsible for care of materials and equipment on-site: Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site. Materials and equipment may be stored on the premises subject to approval of

Owner. When Contractor uses any portion of the Project site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.

- F. Contractor responsible for loss of materials and equipment: Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Substantial Completion, and shall repair or replace without cost to Owner any damage or loss that may occur, except damages or loss caused by the acts or omissions of Owner. Contractor shall also protect and be responsible for any damage or loss to the Work, or to the materials or equipment, after the date of Substantial Completion, and shall repair or replace without cost to Owner any such damage or loss that might occur, to the extent such damages or loss are caused by the acts or omissions of Contractor, or any Subcontractor.

**5.09 PRIOR NOTICE OF EXCAVATION**

- A. Excavation defined; Use of locator services: "Excavation" means an operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means, except the tilling of soil less than 12 inches in depth for agricultural purposes, or road ditch maintenance that does not change the original road grade or ditch flow line. Before commencing any excavation, Contractor shall provide notice of the scheduled commencement of excavation to all owners of underground facilities or utilities, through locator services.

**5.10 UNFORESEEN PHYSICAL CONDITIONS**

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than 7 Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.
- B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Part 7.

**5.11 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES AND IMPROVEMENTS**

- A. Contractor to protect and repair property: Contractor shall protect from damage all existing structures, equipment, improvements, utilities, and vegetation: at or near the Project site; and on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, Owner may have the necessary work performed and charge the cost to Contractor.
- B. Tree and vegetation protection: Contractor shall only remove trees when specifically authorized to do so, and shall protect vegetation that will remain in place.

**5.12 LAYOUT OF WORK**

- A. Advanced planning of the Work: Contractor shall plan and lay out the Work in advance of operations so as to coordinate all work without delay or revision.

- B. Layout responsibilities: Contractor shall lay out the Work from Owner-established baselines and bench marks indicated on the Drawings, and shall be responsible for all field measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the Work. Contractor shall be responsible for executing the Work to the lines and grades that may be established. Contractor shall be responsible for maintaining or restoring all stakes and other marks established.

#### **5.13 MATERIAL AND EQUIPMENT**

- A. Contractor to provide new and equivalent equipment and materials: All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of A/E, is equal to that named in the specifications, unless otherwise specifically provided in the Contract Documents.
- B. Contractor responsible for fitting parts together: Contractor shall do all cutting, fitting, or patching that may be required to make its several parts fit together properly, or receive or be received by work of others set forth in, or reasonably implied by, the Contract Documents. Contractor shall not endanger any work by cutting, excavating, or otherwise altering the Work and shall not cut or alter the work of any other contractor unless approved in advance by Owner.
- C. Owner may reject defective Work: Should any of the Work be found defective, or in any way not in accordance with the Contract Documents, this work, in whatever stage of completion, may be rejected by Owner.

#### **5.14 AVAILABILITY AND USE OF UTILITY SERVICES**

- A. Owner to provide and charge for utilities: Owner shall make all reasonable utilities available to Contractor from existing outlets and supplies, as specified in the Contract Documents. Unless otherwise provided in the Contract Documents, the utility service consumed shall be charged to or paid for by Contractor at prevailing rates charged to Owner or, where the utility is produced by Owner, at reasonable rates determined by Owner. Contractor will carefully conserve any utilities furnished.
- B. Contractor to install temporary connections and meters: Contractor shall, at its expense and in a skillful manner satisfactory to Owner, install and maintain all necessary temporary connections and distribution lines, together with appropriate protective devices, and all meters required to measure the amount of each utility used for the purpose of determining charges. Prior to the date of Final Acceptance, Contractor shall remove all temporary connections, distribution lines, meters, and associated equipment and materials.

#### **5.15 TESTS AND INSPECTION**

- A. Contractor to provide for all testing and inspection of Work: Contractor shall maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall be responsible for inspection and quality surveillance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. Contractor shall give Owner timely notice of when and

where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to Owner.

- B. Owner may conduct tests and inspections: Owner may, at any reasonable time, conduct such inspections and tests as it deems necessary to ensure that the Work is in accordance with the Contract Documents. Owner shall promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract Documents. Unless the subject items are expressly accepted by Owner, such Owner inspection and tests are for the sole benefit of Owner and do not:
1. Constitute or imply acceptance;
  2. Relieve Contractor of responsibility for providing adequate quality control measures;
  3. Relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment;
  4. Relieve Contractor of its responsibility to comply with the requirements of the Contract Documents; or
  5. Impair Owner's right to reject defective or nonconforming items, or to avail itself of any other remedy to which it may be entitled.
- C. Inspections or inspectors do not modify Contract Documents: Neither observations by an inspector retained by Owner, the presence or absence of such inspector on the site, nor inspections, tests, or approvals by others, shall relieve Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.
- D. Contractor responsibilities on inspections: Contractor shall promptly furnish, without additional charge, all facilities, labor, material and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by Owner. Owner may charge Contractor any additional cost of inspection or testing when Work is not ready at the time specified by Contractor for inspection or testing, or when prior rejection makes reinspection or retest necessary. Owner shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

#### **5.16 CORRECTION OF NONCONFORMING WORK**

- A. Work covered by Contractor without inspection: If a portion of the Work is covered contrary to the requirements in the Contract Documents, it must, if required in writing by Owner, be uncovered for Owner's observation and be replaced at the Contractor's expense and without change in the Contract Time.
- B. Payment provisions for uncovering covered Work: If, at any time prior to Final Completion, Owner desires to examine the Work, or any portion of it, which has been covered, Owner may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an adjustment in the Contract Sum for the costs of uncovering and replacement, and, if completion of the Work is thereby delayed, an adjustment in the Contract Time, provided it makes such a request as provided in Part 7. If such Work is not in accordance with the Contract Documents, the Contractor shall pay the costs of examination and reconstruction.
- C. Contractor to correct and pay for non-conforming Work: Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or

completed. Contractor shall bear all costs of correcting such nonconforming Work, including additional testing and inspections.

- D. Contractor's compliance with warranty provisions: If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or within one year after the date for commencement of any system warranties established under Section 6.08, or within the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written notice from Owner to do so. Owner shall give such notice promptly after discovery of the condition. This period of one year shall be extended, with respect to portions of Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual performance of the Work. Contractor's duty to correct with respect to Work repaired or replaced shall run for one year from the date of repair or replacement. Obligations under this paragraph shall survive Final Acceptance.
- E. Contractor to remove non-conforming Work: Contractor shall remove from the Project site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.
- F. Owner may charge Contractor for non-conforming Work: If Contractor fails to correct nonconforming Work within a reasonable time after written notice to do so, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.
- G. Contractor to pay for damaged Work during correction: Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- H. No Period of limitation on other requirements: Nothing contained in this section shall be construed to establish a period of limitation with respect to other obligations which Contractor might have according to the Contract Documents. Establishment of the time period of one year as described in Section 5.16D relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the Contractor's obligation to comply with the Contract Documents may be sought to be enforced, including the time within which such proceedings may be commenced.
- I. Owner may accept non-conforming Work and charge Contractor: If Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, Owner may do so instead of requiring its removal and correction, in which case the Contract Sum may be reduced as appropriate and equitable.

#### **5.17 CLEAN UP**

Contractor to keep site clean and leave it clean: Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

#### **5.18 ACCESS TO WORK**

Owner and A/E access to Work site: Contractor shall provide Owner and A/E access to the Work in progress wherever located.

## 5.19 OTHER CONTRACTS

Owner may award other contracts; Contractor to cooperate: Owner may undertake or award other contracts for additional work at or near the Project site. Contractor shall reasonably cooperate with the other contractors and with Owner's employees and shall carefully adapt scheduling and perform the Work in accordance with these Contract Documents to reasonably accommodate the other work.

## 5.20 SUBCONTRACTORS AND SUPPLIERS

A. Subcontractor Responsibility: The Contractor shall include the language of this paragraph in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this paragraph apply to all subcontractors regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
2. Have a current Washington Unified Business Identifier (UBI) number;
3. If applicable, have:
  - a. Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
  - b. A Washington Employment Security Department number, as required in Title 50 RCW;
  - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
  - d. An electrical contractor license, if required by Chapter 19.28 RCW;
  - e. An elevator contractor license, if required by Chapter 70.87 RCW.
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).
5. On a project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the Owner's first advertisement of the project.

B. Provide names of Subcontractors and use qualified firms: Before submitting the first Application for Payment, Contractor shall furnish in writing to Owner the names, addresses, and telephone numbers of all Subcontractors, as well as suppliers providing materials in excess of \$2,500. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified, and meet the requirements of the Contract Documents, if any. Contractor shall not utilize any Subcontractor or supplier to whom the Owner has a reasonable objection, and shall obtain Owner's written consent before making any substitutions or additions.

- C. Subcontracts in writing and pass through provision: All Subcontracts must be in writing. By appropriate written agreement, Contractor shall require each Subcontractor, so far as applicable to the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Owner in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Owner in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. However, nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.
- D. Coordination of Subcontractors; Contractor responsible for Work: Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.
- E. Automatic assignment of subcontracts: Each subcontract agreement for a portion of the Work is hereby assigned by Contractor to Owner provided that:
1. Effective only after termination and Owner approval: The assignment is effective only after termination by Owner for cause pursuant to Section 9.01 and only for those Subcontracts which Owner accepts by notifying the Subcontractor in writing; and
  2. Owner assumes Contractor's responsibilities: After the assignment is effective, Owner will assume all future duties and obligations toward the Subcontractor which Contractor assumed in the Subcontract.
  3. Impact of bond: The assignment is subject to the prior rights of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

## 5.21 WARRANTY OF CONSTRUCTION

- A. Contractor warranty of Work: In addition to any special warranties provided elsewhere in the Contract Documents, Contractor warrants that all Work conforms to the requirements of the Contract Documents and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor.
- B. Contractor responsibilities: With respect to all warranties, express or implied, for Work performed or materials furnished according to the Contract Documents, Contractor shall:
1. Obtain warranties: Obtain all warranties that would be given in normal commercial practice;
  2. Warranties for benefit of Owner: Require all warranties to be executed, in writing, for the benefit of Owner;
  3. Enforcement of warranties: Enforce all warranties for the benefit of Owner, if directed by Owner; and
  4. Contractor responsibility for subcontractor warranties: Be responsible to enforce any subcontractor's, manufacturer's, or supplier's warranties should they extend beyond the period specified in the Contract Documents.
- C. Warranties beyond Final Acceptance: The obligations under this section shall survive Final Acceptance.

**5.22    INDEMNIFICATION**

- A.    Contractor to indemnify Owner: Contractor shall defend, indemnify, and hold Owner and A/E harmless from and against all claims, demands, losses, damages, or costs, including but not limited to damages arising out of bodily injury or death to persons and damage to property, caused by or resulting from:
1.    Sole negligence of Contractor: The sole negligence of Contractor or any of its Subcontractors;
  2.    Concurrent negligence: The concurrent negligence of Contractor, or any Subcontractor, but only to the extent of the negligence of Contractor or such Subcontractor; and
  3.    Patent infringement: The use of any design, process, or equipment which constitutes an infringement of any United States patent presently issued, or violates any other proprietary interest, including copyright, trademark, and trade secret.
- B.    Employee action and RCW Title 51: In any action against Owner and any other entity indemnified in accordance with this section, by any employee of Contractor, its Subcontractors, Sub-subcontractors, agents, or anyone directly or indirectly employed by any of them, the indemnification obligation of this section shall not be limited by a limit on the amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under RCW Title 51, the Industrial Insurance Act, or any other employee benefit acts. In addition, Contractor waives immunity as to Owner and A/E only, in accordance with RCW Title 51.

**PART 6 – PAYMENTS AND COMPLETION**

**6.01    CONTRACT SUM**

Owner shall pay Contract Sum: Owner shall pay Contractor the Contract Sum plus state sales tax for performance of the Work, in accordance with the Contract Documents.

**6.02    SCHEDULE OF VALUES**

Contractor to submit Schedule of Values: Before submitting its first Application for Payment, Contractor shall submit to Owner for approval a breakdown allocating the total Contract Sum to each principal category of work, in such detail as requested by Owner ("Schedule of Values"). The approved Schedule of Values shall include appropriate amounts for demobilization, record drawings, O&M manuals, and any other requirements for Project closeout, and shall be used by Owner as the basis for progress payments. Payment for Work shall be made only for and in accordance with those items included in the Schedule of Values.

**6.03    APPLICATION FOR PAYMENT**

- A.    Monthly Application for Payment with substantiation: At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an itemized Application for Payment for Work completed in accordance with the Contract Documents and the approved Schedule of Values. Each application shall be supported by such substantiating data as Owner may require.
- B.    Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.011, as their interests appeared in the last preceding certificate of payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Section 1.03, are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment.

- C. Reconciliation of Work with Progress Schedule: At the time it submits an Application for Payment, Contractor shall analyze and reconcile, to the satisfaction of Owner, the actual progress of the Work with the Progress Schedule.
- D. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:
1. Suitable facility or location: The material will be placed in a facility or location that is structurally sound, dry, lighted and suitable for the materials to be stored;
  2. Facility or location within 10 miles of Project: The facility or location is located within a 10-mile radius of the Project. Other locations may be utilized, if approved in writing, by Owner;
  3. Facility or location exclusive to Project's materials: Only materials for the Project are stored within the facility or location (or a secure portion of a facility or location set aside for the Project);
  4. Insurance provided on materials in facility or location: Contractor furnishes Owner a certificate of insurance extending Contractor's insurance coverage for damage, fire, and theft to cover the full value of all materials stored, or in transit;
  5. Facility or location locked and secure: The facility or location (or secure portion thereof) is continuously under lock and key, and only Contractor's authorized personnel shall have access;
  6. Owner right of access to facility or location: Owner shall at all times have the right of access in company of Contractor;
  7. Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and
  8. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Owner certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Owner when materials are moved from storage to the Project site.

#### **6.04 PROGRESS PAYMENTS**

- A. Owner to pay within 30 Days: Owner shall make progress payments, in such amounts as Owner determines are properly due, within 30 Days after receipt of a properly executed Application for Payment. Owner shall notify Contractor in accordance with chapter 39.76 RCW if the Application for Payment does not comply with the requirements of the Contract Documents.
- B. Withholding retainage; Options for retainage: Owner shall retain 5% of the amount of each progress payment until 45 Days after Final Acceptance and receipt of all documents required by law or the Contract Documents, including, at Owner's request, consent of surety to release of the retainage. In accordance with chapter 60.28 RCW, Contractor may request that monies reserved be retained in a fund by Owner, deposited by Owner in a bank or savings and loan, or placed in escrow with a bank or trust company to be converted into bonds and securities to be held in escrow with interest to be paid to Contractor. Owner may permit Contractor to provide an appropriate bond in lieu of the retained funds.

- C. Title passes to Owner upon payment: Title to all Work and materials covered by a progress payment shall pass to Owner at the time of such payment free and clear of all liens, claims, security interests, and encumbrances. Passage of title shall not, however, relieve Contractor from any of its duties and responsibilities for the Work or materials, or waive any rights of Owner to insist on full compliance by Contractor with the Contract Documents.
- D. Interest on unpaid balances: Payments due and unpaid in accordance with the Contract Documents shall bear interest as specified in chapter 39.76 RCW.

#### **6.05 PAYMENTS WITHHELD**

- A. Owner's right to withhold payment: Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary to protect Owner from loss or damage for reasons including but not limited to:
1. Non-compliant Work: Work not in accordance with the Contract Documents;
  2. Remaining Work to cost more than unpaid balance: Reasonable evidence that the Work required by the Contract Documents cannot be completed for the unpaid balance of the Contract Sum;
  3. Owner correction or completion Work: Work by Owner to correct defective Work or complete the Work in accordance with Section 5.16;
  4. Contractor's failure to perform: Contractor's failure to perform in accordance with the Contract Documents; or
  5. Contractor's negligent acts or omissions: Cost or liability that may occur to Owner as the result of Contractor's fault or negligent acts or omissions.
- B. Owner to notify Contractor of withholding for unsatisfactory performance: In any case where part or all of a payment is going to be withheld for unsatisfactory performance, Owner shall notify Contractor in accordance with chapter 39.76 RCW.

#### **6.06 RETAINAGE AND BOND CLAIM RIGHTS**

Chapters 39.08 RCW and 60.28 RCW incorporated by reference: Chapters 39.08 RCW and 60.28 RCW, concerning the rights and responsibilities of Contractor and Owner with regard to the performance and payment bonds and retainage, are made a part of the Contract Documents by reference as though fully set forth herein.

#### **6.07 SUBSTANTIAL COMPLETION**

Substantial Completion defined: Substantial Completion is the stage in the progress of the Work (or portion thereof designated and approved by Owner) when the construction is sufficiently complete, in accordance with the Contract Documents, so Owner has full and unrestricted use and benefit of the facilities (or portion thereof designated and approved by Owner) for the use for which it is intended. All Work other than incidental corrective or punch list work shall be completed. Substantial Completion shall not have been achieved if all systems and parts are not functional, if utilities are not connected and operating normally, if all required occupancy permits have not been issued, or if the Work is not accessible by normal vehicular and pedestrian traffic routes. The date Substantial Completion is achieved shall be established in writing by Owner. Contractor may request an early date of Substantial Completion which must be approved by Change Order. Owner's occupancy of the Work or designated portion thereof does not necessarily indicate that Substantial Completion has been achieved.

**6.08 PRIOR OCCUPANCY**

- A. Prior Occupancy defined; Restrictions: Owner may, upon written notice thereof to Contractor, take possession of or use any completed or partially completed portion of the Work ("Prior Occupancy") at any time prior to Substantial Completion. Unless otherwise agreed in writing, Prior Occupancy shall not: be deemed an acceptance of any portion of the Work; accelerate the time for any payment to Contractor; prejudice any rights of Owner provided by any insurance, bond, guaranty, or the Contract Documents; relieve Contractor of the risk of loss or any of the obligations established by the Contract Documents; establish a date for termination or partial termination of the assessment of liquidated damages; or constitute a waiver of claims.
- B. Damage; Duty to repair and warranties: Notwithstanding anything in the preceding paragraph, Owner shall be responsible for loss of or damage to the Work resulting from Prior Occupancy. Contractor's one year duty to repair any system warranties shall begin on building systems activated and used by Owner as agreed in writing by Owner and Contractor.

**6.09 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT**

- A. Final Completion defined: Final Completion shall be achieved when the Work is fully and finally complete in accordance with the Contract Documents. The date Final Completion is achieved shall be established by Owner in writing, but in no case shall constitute Final Acceptance which is a subsequent, separate, and distinct action.
- B. Final Acceptance defined: Final Acceptance shall be achieved when the Contractor has completed the requirements of the Contract Documents. The date Final Acceptance is achieved shall be established by Owner in writing. Prior to Final Acceptance, Contractor shall, in addition to all other requirements in the Contract Documents, submit to Owner a written notice of any outstanding disputes or claims between Contractor and any of its Subcontractors, including the amounts and other details thereof. Neither Final Acceptance, nor final payment, shall release Contractor or its sureties from any obligations of these Contract Documents or the payment and performance bonds, or constitute a waiver of any claims by Owner arising from Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Final payment waives Claim rights: Acceptance of final payment by Contractor, or any Subcontractor, shall constitute a waiver and release to Owner of all claims by Contractor, or any such Subcontractor, for an increase in the Contract Sum or the Contract Time, and for every act or omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in Part 8.

**PART 7 – CHANGES**

**7.01 CHANGE IN THE WORK**

- A. Changes in Work, Contract Sum, and Contract Time by Change Order: Owner may, at any time and without notice to Contractor's surety, order additions, deletions, revisions, or other changes in the Work. These changes in the Work shall be incorporated into the Contract Documents through the execution of Change Orders. If any change in the Work ordered by Owner causes an increase or decrease in the Contract Sum or the Contract Time, an equitable adjustment shall be made as provided in Section 7.02 or 7.03, respectively, and such adjustment(s) shall be incorporated into a Change Order.
- B. Owner may request COP from Contractor: If Owner desires to order a change in the Work, it may request a written Change Order Proposal (COP) from Contractor. Contractor shall submit a Change Order Proposal within 14 Days of the request from Owner, or within such other period as mutually agreed. Contractor's Change Order Proposal shall be full compensation for

implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work.

- C. COP negotiations: Upon receipt of the Change Order Proposal, or a request for equitable adjustment in the Contract Sum or Contract Time, or both, as provided in Sections 7.02 and 7.03, Owner may accept or reject the proposal, request further documentation, or negotiate acceptable terms with Contractor. Pending agreement on the terms of the Change Order, Owner may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Owner's approval. All Work done pursuant to any Owner-directed change in the Work shall be executed in accordance with the Contract Documents.
- D. Change Order as full payment and final settlement: If Owner and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment.
- E. Failure to agree upon terms of Change Order; Final offer and Claims: If Owner and Contractor are unable to reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, Contractor may at any time in writing, request a final offer from Owner. Owner shall provide Contractor with its written response within 30 Days of Contractor's request. Owner may also provide Contractor with a final offer at any time. If Contractor rejects Owner's final offer, or the parties are otherwise unable to reach agreement, Contractor's only remedy shall be to file a Claim as provided in Part 8.
- F. Field Authorizations: The Owner may direct the Contractor to proceed with a change in the work through a written Field Authorization (also referred to as a Field Order) when the time required to price and execute a Change Order would impact the Project.

The Field Authorization shall describe and include the following:

1. The scope of work
2. An agreed upon maximum not-to-exceed amount
3. Any estimated change to the Contract Time
4. The method of final cost determination in accordance with the requirements of Part 7 of the General Conditions
5. The supporting cost data to be submitted in accordance with the requirements of Part 7 of the General Conditions

Upon satisfactory submittal by the Contractor and approval by the Owner of supporting cost data, a Change Order will be executed. The Owner will not make payment to the Contractor for Field Authorization work until that work has been incorporated into an executed Change Order.

**7.02 CHANGE IN THE CONTRACT SUM**

**A. General Application**

1. Contract Sum changes only by Change Order: The Contract Sum shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Sum in its Change Order Proposal.
2. Owner fault or negligence as basis for change in Contract Sum: If the cost of Contractor's performance is changed due to the fault or negligence of Owner, or anyone for whose acts Owner is responsible, Contractor shall be entitled to make a request for an equitable adjustment in the Contract Sum in accordance with the following procedure. No change in the Contract Sum shall be allowed to the extent: Contractor's changed cost of performance is due to the fault or negligence of Contractor, or anyone for whose acts Contractor is responsible; the change is concurrently caused by Contractor and Owner; or the change is caused by an act of Force Majeure as defined in Section 3.05.
  - (a) Notice and record keeping for equitable adjustment: A request for an equitable adjustment in the Contract Sum shall be based on written notice delivered to Owner within 7 Days of the occurrence of the event giving rise to the request. For purposes of this part, "occurrence" means when Contractor knew, or in its diligent prosecution of the Work should have known, of the event giving rise to the request. If Contractor believes it is entitled to an adjustment in the Contract Sum, Contractor shall immediately notify Owner and begin to keep and maintain complete, accurate, and specific daily records. Contractor shall give Owner access to any such records and, if requested shall promptly furnish copies of such records to Owner.
  - (b) Content of notice for equitable adjustment; Failure to comply: Contractor shall not be entitled to any adjustment in the Contract Sum for any occurrence of events or costs that occurred more than 7 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Sum; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Sum requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
  - (c) Contractor to provide supplemental information: Within 30 Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with subparagraph a. above with additional supporting data. Such additional data shall include, at a minimum: the amount of compensation requested, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the damages claimed, but that the damages claimed were actually a result of the act, event, or condition complained of and that the Contract Documents provide entitlement to an equitable adjustment to Contractor for such act, event, or condition; and documentation sufficiently detailed to permit an informed analysis of the request by Owner. When the request for compensation relates to a delay, or other change in Contract Time, Contractor shall demonstrate the impact on the critical path, in accordance with Section 7.03C. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

- (d) Contractor to proceed with Work as directed: Pending final resolution of any request made in accordance with this paragraph, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Work.
  - (e) Contractor to combine requests for same event together: Any requests by Contractor for an equitable adjustment in the Contract Sum and in the Contract Time that arise out of the same event(s) shall be submitted together.
3. Methods for calculating Change Order amount: The value of any Work covered by a Change Order, or of any request for an equitable adjustment in the Contract Sum, shall be determined by one of the following methods:
- a. Fixed Price: On the basis of a fixed price as determined in paragraph 7.02B.
  - b. Unit Prices: By application of unit prices to the quantities of the items involved as determined in paragraph 7.02C.
  - c. Time and Materials: On the basis of time and material as determined in paragraph 7.02D.
4. Fixed price method is default; Owner may direct otherwise: When Owner has requested Contractor to submit a Change Order Proposal, Owner may direct Contractor as to which method in subparagraph 3 above to use when submitting its proposal. Otherwise, Contractor shall determine the value of the Work, or of a request for an equitable adjustment, on the basis of the fixed price method.

**B. Change Order Pricing – Fixed Price**

Procedures: When the fixed price method is used to determine the value of any Work covered by a Change Order, or of a request for an equitable adjustment in the Contract Sum, the following procedures shall apply:

- 1. Breakdown and itemization of details on COP: Contractor's Change Order Proposal, or request for adjustment in the Contract Sum, shall be accompanied by a complete itemization of the costs, including labor, material, subcontractor costs, and overhead and profit. The costs shall be itemized in the manner set forth below, and shall be submitted on breakdown sheets in a form approved by Owner.
- 2. Use of industry standards in calculating costs: All costs shall be calculated based upon appropriate industry standard methods of calculating labor, material quantities, and equipment costs.
- 3. Costs contingent on Owner's actions: If any of Contractor's pricing assumptions are contingent upon anticipated actions of Owner, Contractor shall clearly state them in the proposal or request for an equitable adjustment.
- 4. Markups on additive and deductive Work: The cost of any additive or deductive changes in the Work shall be calculated as set forth below, except that overhead and profit shall not be included on deductive changes in the Work. Where a change in the Work involves additive and deductive work by the same Contractor or Subcontractor, small tools, overhead, profit, bond and insurance markups will apply to the net difference.
- 5. Breakdown not required if change less than \$1,000: If the total cost of the change in the Work or request for equitable adjustment does not exceed \$1,000, Contractor shall not be required to submit a breakdown if the description of the change in the Work or request for equitable adjustment is sufficiently definitive for Owner to determine fair value.

6. Breakdown required if change between \$1,000 and \$2,500: If the total cost of the change in the Work or request for equitable adjustment is between \$1,000 and \$2,500, Contractor may submit a breakdown in the following level of detail if the description of the change in the Work or if the request for equitable adjustment is sufficiently definitive to permit the Owner to determine fair value:
- a. lump sum labor;
  - b. lump sum material;
  - c. lump sum equipment usage;
  - d. overhead and profit as set forth below; and
  - e. insurance and bond costs as set forth below.
7. Components of increased cost: Any request for adjustment of Contract Sum based upon the fixed price method shall include only the following items:
- a. Craft labor costs: These are the labor costs determined by multiplying the estimated or actual additional number of craft hours needed to perform the change in the Work by the hourly labor costs. Craft hours should cover direct labor, as well as indirect labor due to trade inefficiencies. The hourly costs shall be based on the following:
    - (1) Basic wages and benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved "statement of intent to pay prevailing wages" or a higher amount if approved by the Owner. Direct supervision shall be a reasonable percentage not to exceed 15% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.
    - (2) Worker's insurance: Direct contributions to the state of Washington for industrial insurance; medical aid; and supplemental pension, by the class and rates established by the Department of Labor and Industries.
    - (3) Federal insurance: Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation Act.
    - (4) Travel allowance: Travel allowance and/or subsistence, if applicable, not exceeding those allowances established by regional labor union agreements, which are itemized and identified separately.
    - (5) Safety: Cost incurred due to the Washington Industrial Safety and Health Act, which shall be a reasonable percentage not to exceed 2% of the sum of the amounts calculated in (1), (2), and (3) above.
  - b. Material costs: This is an itemization of the quantity and cost of materials needed to perform the change in the Work. Material costs shall be developed first from actual known costs, second from supplier quotations or if these are not available, from standard industry pricing guides. Material costs shall consider all available discounts. Freight costs, express charges, or special delivery charges, shall be itemized.

c. Equipment costs: This is an itemization of the type of equipment and the estimated or actual length of time the construction equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for construction equipment only if used solely for the changed Work, or for additional rental costs actually incurred by the Contractor. Equipment charges shall be computed on the basis of actual invoice costs or if owned, from the current edition of one of the following sources:

- (1) Associated General Contractors Washington State Department of Transportation (AGC WSDOT) Equipment Rental Agreement current edition, on the Contract execution date.
- (2) The National Electrical Contractors Association for equipment used on electrical work.
- (3) The Mechanical Contractors Association of America for equipment used on mechanical work.

The EquipmentWatch Rental Rate Blue Book shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed that shown in the AGC WSDOT Equipment Rental Agreement, current edition on the Contract execution date.

d. Allowance for small tools, expendables & consumable supplies: Small tools consist of tools which cost \$250 or less and are normally furnished by the performing contractor. The maximum rate for small tools shall not exceed the following:

- (1) 3% for Contractor: For Contractor, 3% of direct labor costs.
- (2) 5% for Subcontractors: For Subcontractors, 5% of direct labor costs.

Expendables and consumables supplies directly associated with the change in Work must be itemized.

e. Subcontractor costs: This is defined as payments Contractor makes to Subcontractors for changed Work performed by Subcontractors of any tier. The Subcontractors' cost of Work shall be calculated and itemized in the same manner as prescribed herein for Contractor.

f. Allowance for overhead: This is defined as costs of any kind attributable to direct and indirect delay, acceleration, or impact, added to the total cost to Owner of any change in the Contract Sum. If the Contractor is compensated under Section 7.03D, the amount of such compensation shall be reduced by the amount Contractor is otherwise entitled to under this subsection (f). This allowance shall compensate Contractor for all noncraft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B&O taxes, office engineering, estimating costs, additional overhead because of extended time, and any other cost incidental to the change in the Work. It shall be strictly limited in all cases to a reasonable amount, mutually acceptable, or if none can be agreed upon to an amount not to exceed the rates below:

- (1). Projects less than \$3 million: For projects where the Contract Award Amount is under \$3 million, the following shall apply:

**Section 00 72 00**  
**GENERAL CONDITIONS**  
**FOR WASHINGTON STATE FACILITY CONSTRUCTION**  
**Page 34 of 44**

- (a) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, 16% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
  - (b) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 16% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
  - (c) Contractor markup for Subcontractor Work: For Contractor, for any work performed by its Subcontractor(s) 6% of the first \$50,000 of the amount due each Subcontractor, and 4% of the remaining amount if any.
  - (d) Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor, and 2% of the remaining amount if any.
  - (e) Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Section 7.02B 7a. – e.
- (2). Projects more than \$3 million: For projects where the Contract Award Amount is equal to or exceeds \$3 million, the following shall apply:
- (a) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, 12% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
  - (b) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 12% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
  - (c) Contractor markup for Subcontractor Work: For Contractor, for any Work performed by its Subcontractor(s), 4% of the first \$50,000 of the amount due each Subcontractor, and 2% of the remaining amount if any.
  - (d) Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor, and 2% of the remaining amount if any.
  - (e) Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Section 7.02B 7a. – e.
- g. Allowance for profit: Allowance for profit is an amount to be added to the cost of any change in contract sum, but not to the cost of change in Contract Time for which contractor has been compensated pursuant to the conditions set forth in Section 7.03. It shall be limited to a reasonable amount, mutually acceptable, or if none can be agreed upon, to an amount not to exceed the rates below:
- (1) Contractor / Subcontractor markup for self-performed Work: For Contractor or Subcontractor of any tier for work performed by their forces, 6% of the cost developed in accordance with Section 7.02B 7a. – e.

- (2) Contractor / Subcontractor markup for Work performed at lower tier: For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 4% of the subcontract cost developed in accordance with Section 7.02B 7a. – h.
- h. Insurance and bond premiums: Cost of change in insurance or bond premium: This is defined as:
  - (1) Contractor's liability insurance: The cost of any changes in Contractor's liability insurance arising directly from execution of the Change Order; and
  - (2) Payment and Performance Bond: The cost of the additional premium for Contractor's bond arising directly from the changed Work.

The cost of any change in insurance or bond premium shall be added after overhead and allowance for profit are calculated in accordance with subparagraph f. and g above.

**C. Change Order Pricing – Unit Prices**

- 1. Content of Owner authorization: Whenever Owner authorizes Contractor to perform Work on a unit-price basis, Owner's authorization shall clearly state:
  - a. Scope: Scope of work to be performed;
  - b. Reimbursement basis: Type of reimbursement including pre-agreed rates for material quantities; and
  - c. Reimbursement limit: Cost limit of reimbursement.
- 2. Contractor responsibilities: Contractor shall:
  - a. Cooperate with Owner and assist in monitoring the Work being performed. As requested by Owner, Contractor shall identify workers assigned to the Change Order Work and areas in which they are working;
  - b. Leave access as appropriate for quantity measurement; and
  - c. Not exceed any cost limit(s) without Owner's prior written approval.
- 3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with paragraph 7.02B and satisfy the following requirements:
  - a. Unit prices must include overhead, profit, bond and insurance premiums: Unit prices shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs; and
  - b. Owner verification of quantities: Quantities must be supported by field measurement statements signed by Owner.

**D. Change Order Pricing – Time-and-Material Prices**

- 1. Content of Owner authorization: Whenever Owner authorizes Contractor to perform Work on a time-and-material basis, Owner's authorization shall clearly state:
  - a. Scope: Scope of Work to be performed;

- b. Reimbursement basis: Type of reimbursement including pre-agreed rates, if any, for material quantities or labor; and
  - c. Reimbursement limit: Cost limit of reimbursement.
2. Contractor responsibilities: Contractor shall:
- a. Identify workers assigned: Cooperate with Owner and assist in monitoring the Work being performed. As requested by Owner, identify workers assigned to the Change Order Work and areas in which they are working;
  - b. Provide daily timesheets: Identify on daily time sheets all labor performed in accordance with this authorization. Submit copies of daily time sheets within 2 working days for Owner's review.
  - c. Allow Owner to measure quantities: Leave access as appropriate for quantity measurement;
  - d. Perform Work efficiently: Perform all Work in accordance with this section as efficiently as possible; and
  - e. Not exceed Owner's cost limit: Not exceed any cost limit(s) without Owner's prior written approval.
3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with paragraph 7.02B and additional verification supported by:
- a. Timesheets: Labor detailed on daily time sheets; and
  - b. Invoices: Invoices for material.

### 7.03 CHANGE IN THE CONTRACT TIME

- A. COP requests for Contract Time: The Contract Time shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Time in its Change Order Proposal.
- B. Time extension permitted if not Contractor's fault: If the time of Contractor's performance is changed due to an act of Force Majeure, or due to the fault or negligence of Owner or anyone for whose acts Owner is responsible, Contractor shall be entitled to make a request for an equitable adjustment in the Contract Time in accordance with the following procedure. No adjustment in the Contract Time shall be allowed to the extent Contractor's changed time of performance is due to the fault or negligence of Contractor, or anyone for whose acts Contractor is responsible.
- 1. Notice and record keeping for Contract Time request: A request for an equitable adjustment in the Contract Time shall be based on written notice delivered within 7 Days of the occurrence of the event giving rise to the request. If Contractor believes it is entitled to adjustment of Contract Time, Contractor shall immediately notify Owner and begin to keep and maintain complete, accurate, and specific daily records. Contractor shall give Owner access to any such record and if requested, shall promptly furnish copies of such record to Owner.
  - 2. Timing and content of Contractor's Notice: Contractor shall not be entitled to an adjustment in the Contract Time for any events that occurred more than 7 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the

Contract Time; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Time requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

3. Contractor to provide supplemental information: Within 30 Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with subparagraph 7.03B.2 with additional supporting data. Such additional data shall include, at a minimum: the amount of delay claimed, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the delay claimed, but that the delay claimed was actually a result of the act, event, or condition complained of, and that the Contract Documents provide entitlement to an equitable adjustment in Contract Time for such act, event, or condition; and supporting documentation sufficiently detailed to permit an informed analysis of the request by Owner. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
  4. Contractor to proceed with Work as directed: Pending final resolution of any request in accordance with this paragraph, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Work.
- C. Contractor to demonstrate impact on critical path of schedule: Any change in the Contract Time covered by a Change Order, or based on a request for an equitable adjustment in the Contract Time, shall be limited to the change in the critical path of Contractor's schedule attributable to the change of Work or event(s) giving rise to the request for equitable adjustment. Any Change Order Proposal or request for an adjustment in the Contract Time shall demonstrate the impact on the critical path of the schedule. Contractor shall be responsible for showing clearly on the Progress Schedule that the change or event: had a specific impact on the critical path, and except in case of concurrent delay, was the sole cause of such impact; and could not have been avoided by resequencing of the Work or other reasonable alternatives.
- D. Cost of change in Contract Time: Contractor may request compensation for the cost of a change in Contract Time in accordance with this paragraph, 7.03D, subject to the following conditions:
1. Must be solely fault of Owner or A/E: The change in Contract Time shall solely be caused by the fault or negligence of Owner or A/E;
  2. Procedures: Contractor shall follow the procedure set forth in paragraph 7.03B;
  3. Demonstrate impact on critical path: Contractor shall establish the extent of the change in Contract Time in accordance with paragraph 7.03C; and
  4. Limitations on daily costs: The daily cost of any change in Contract Time shall be limited to the items below, less the amount of any change in the Contract Sum the Contractor may otherwise be entitled to pursuant to Section 7.02B 7f for any change in the Work that contributed to this change in Contract Time:
    - a. Non-productive supervision or labor: cost of nonproductive field supervision or labor extended because of delay;
    - b. Weekly meetings and indirect activities: cost of weekly meetings or similar indirect activities extended because of the delay;

- c. Temporary facilities or equipment rental: cost of temporary facilities or equipment rental extended because of the delay;
- d. Insurance premiums: cost of insurance extended because of the delay;
- e. Overhead: general and administrative overhead in an amount to be agreed upon, but not to exceed 3% of the Contract Award Amount divided by the originally specified Contract Time for each Day of the delay.

## PART 8 – CLAIMS AND DISPUTE RESOLUTION

### 8.01 CLAIMS PROCEDURE

- A. Claim is Contractor's remedy: If the parties fail to reach agreement on the terms of any Change Order for Owner-directed Work as provided in Section 7.01, or on the resolution of any request for an equitable adjustment in the Contract Sum as provided in Section 7.02 or the Contract Time as provided in Section 7.03, Contractor's only remedy shall be to file a Claim with Owner as provided in this section.
- B. Claim filing deadline for Contractor: Contractor shall file its Claim within 120 Days from Owner's final offer made in accordance with paragraph 7.01E, or by the date of Final Acceptance, whichever occurs first.
- C. Claim must cover all costs and be documented: The Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor may be entitled. It shall be fully substantiated and documented. At a minimum, the Claim shall contain the following information:
  - 1. Factual statement of Claim: A detailed factual statement of the Claim for additional compensation and time, if any, providing all necessary dates, locations, and items of Work affected by the Claim;
  - 2. Dates: The date on which facts arose which gave rise to the Claim;
  - 3. Owner and A/E employee's knowledgeable about Claim: The name of each employee of Owner or A/E knowledgeable about the Claim;
  - 4. Support from Contract Documents: The specific provisions of the Contract Documents which support the Claim;
  - 5. Identification of other supporting information: The identification of any documents and the substance of any oral communications that support the Claim;
  - 6. Copies of supporting documentation: Copies of any identified documents, other than the Contract Documents, that support the Claim;
  - 7. Details on Claim for Contract Time: If an adjustment in the Contract Time is sought: the specific days and dates for which it is sought; the specific reasons Contractor believes an extension in the Contract Time should be granted; and Contractor's analysis of its Progress Schedule to demonstrate the reason for the extension in Contract Time;
  - 8. Details on Claim for adjustment of Contract Sum: If an adjustment in the Contract Sum is sought, the exact amount sought and a breakdown of that amount into the categories set forth in, and in the detail as required by Section 7.02; and

9. Statement certifying Claim: A statement certifying, under penalty of perjury, that the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes Owner is liable.
- D. Owner's response to Claim filed: After Contractor has submitted a fully documented Claim that complies with all applicable provisions of Parts 7 and 8, Owner shall respond, in writing, to Contractor as follows:
1. Response time for Claim less than \$50,000: If the Claim amount is less than \$50,000, with a decision within 60 Days from the date the Claim is received; or
  2. Response time for Claim of \$50,000 or more: If the Claim amount is \$50,000 or more, with a decision within 60 Days from the date the Claim is received, or with notice to Contractor of the date by which it will render its decision. Owner will then respond with a written decision in such additional time.
- E. Owner's review of Claim and finality of decision: To assist in the review of Contractor's Claim, Owner may visit the Project site, or request additional information, in order to fully evaluate the issues raised by the Claim. Contractor shall proceed with performance of the Work pending final resolution of any Claim. Owner's written decision as set forth above shall be final and conclusive as to all matters set forth in the Claim, unless Contractor follows the procedure set forth in Section 8.02.
- F. Waiver of Contractor rights for failure to comply with this Section: Any Claim of the Contractor against the Owner for damages, additional compensation, or additional time, shall be conclusively deemed to have been waived by the Contractor unless made in accordance with the requirements of this Section.

## 8.02 ARBITRATION

- A. Timing of Contractor's demand for arbitration: If Contractor disagrees with Owner's decision rendered in accordance with paragraph 8.01D, Contractor shall provide Owner with a written demand for arbitration. No demand for arbitration of any such Claim shall be made later than 30 Days after the date of Owner's decision on such Claim; failure to demand arbitration within said 30 Day period shall result in Owner's decision being final and binding upon Contractor and its Subcontractors.
- B. Filing of Notice for arbitration: Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), with a copy provided to Owner. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of the AAA, or mutually acceptable service, before seeking arbitration in accordance with the Construction Industry Arbitration Rules of AAA as follows:
1. Claims less than \$30,000: Disputes involving \$30,000 or less shall be conducted in accordance with the Northwest Region Expedited Commercial Arbitration Rules; or
  2. Claims greater than \$30,000: Disputes over \$30,000 shall be conducted in accordance with the Construction Industry Arbitration Rules of the AAA, unless the parties agree to use the expedited rules.
- C. Arbitration is forum for resolving Claims: All Claims arising out of the Work shall be resolved by arbitration. The judgment upon the arbitration award may be entered, or review of the award may

occur, in the superior court having jurisdiction thereof. No independent legal action relating to or arising from the Work shall be maintained.

- D. Owner may combine Claims into same arbitration: Claims between Owner and Contractor, Contractor and its Subcontractors, Contractor and A/E, and Owner and A/E shall, upon demand by Owner, be submitted in the same arbitration or mediation.
- E. Settlement outside of arbitration to be documented in Change Order: If the parties resolve the Claim prior to arbitration judgment, the terms of the resolution shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of the Claim, including all claims for time and for direct, indirect, or consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity.

### 8.03 CLAIMS AUDITS

- A. Owner may audit Claims: All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor, or Subcontractors of any tier, to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim or to permit Owner access to the books and records of Contractor, or Subcontractors of any tier, shall constitute a waiver of the Claim and shall bar any recovery.
- B. Contractor to make documents available: In support of Owner audit of any Claim, Contractor shall, upon request, promptly make available to Owner the following documents:
1. Daily time sheets and supervisor's daily reports;
  2. Collective bargaining agreements;
  3. Insurance, welfare, and benefits records;
  4. Payroll registers;
  5. Earnings records;
  6. Payroll tax forms;
  7. Material invoices, requisitions, and delivery confirmations;
  8. Material cost distribution worksheet;
  9. Equipment records (list of company equipment, rates, etc.);
  10. Vendors', rental agencies', Subcontractors', and agents' invoices;
  11. Contracts between Contractor and each of its Subcontractors, and all lower-tier Subcontractor contracts and supplier contracts;
  12. Subcontractors' and agents' payment certificates;
  13. Cancelled checks (payroll and vendors);
  14. Job cost report, including monthly totals;
  15. Job payroll ledger;
  16. Planned resource loading schedules and summaries;

17. General ledger;
  18. Cash disbursements journal;
  19. Financial statements for all years reflecting the operations on the Work. In addition, the Owner may require, if it deems it appropriate, additional financial statements for 3 years preceding execution of the Work;
  20. Depreciation records on all company equipment whether these records are maintained by the company involved, its accountant, or others;
  21. If a source other than depreciation records is used to develop costs for Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents;
  22. All nonprivileged documents which relate to each and every Claim together with all documents which support the amount of any adjustment in Contract Sum or Contract Time sought by each Claim;
  23. Work sheets or software used to prepare the Claim establishing the cost components for items of the Claim including but not limited to labor, benefits and insurance, materials, equipment, Subcontractors, all documents which establish the time periods, individuals involved, the hours for the individuals, and the rates for the individuals; and
  24. Work sheets, software, and all other documents used by Contractor to prepare its bid.
- C. Contractor to provide facilities for audit and shall cooperate: The audit may be performed by employees of Owner or a representative of Owner. Contractor, and its Subcontractors, shall provide adequate facilities acceptable to Owner, for the audit during normal business hours. Contractor, and all Subcontractors, shall make a good faith effort to cooperate with Owner's auditors.

## PART 9 – TERMINATION OF THE WORK

### 9.01 TERMINATION BY OWNER FOR CAUSE

- A. 7 Day Notice to Terminate for Cause: Owner may, upon 7 Days written notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:
1. Contractor fails to prosecute Work: Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Substantial Completion of the Work within the Contract Time;
  2. Contractor bankrupt: Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
  3. Contractor fails to correct Work: Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;
  4. Contractor fails to supply workers or materials: Contractor repeatedly fails to supply skilled workers or proper materials or equipment;
  5. Contractor failure to pay Subcontractors or labor: Contractor repeatedly fails to make prompt payment due to Subcontractors or for labor;

6. Contractor violates laws: Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
  7. Contractor in material breach of Contract: Contractor is otherwise in material breach of any provision of the Contract Documents.
- B. Owner's actions upon termination: Upon termination, Owner may at its option:
1. Take possession of Project site: Take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;
  2. Accept assignment of Subcontracts: Accept assignment of subcontracts pursuant to Section 5.20; and
  3. Finish the Work: Finish the Work by whatever other reasonable method it deems expedient.
- C. Surety's role: Owner's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.
- D. Contractor's required actions: When Owner terminates the Work in accordance with this section, Contractor shall take the actions set forth in paragraph 9.02B, and shall not be entitled to receive further payment until the Work is accepted.
- E. Contractor to pay for unfinished Work: If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for A/E's services and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of Contractor's actions, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner. These obligations for payment shall survive termination.
- F. Contractor and Surety still responsible for Work performed: Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.
- G. Conversion of "Termination for Cause" to "Termination for Convenience": If Owner terminates Contractor for cause and it is later determined that none of the circumstances set forth in paragraph 9.01A exist, then such termination shall be deemed a termination for convenience pursuant to Section 9.02.

**9.02 TERMINATION BY OWNER FOR CONVENIENCE**

- A. Owner Notice of Termination for Convenience: Owner may, upon written notice, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.
- B. Contractor response to termination Notice: Unless Owner directs otherwise, after receipt of a written notice of termination for either cause or convenience, Contractor shall promptly:
1. Cease Work: Stop performing Work on the date and as specified in the notice of termination;

2. No further orders or Subcontracts: Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;
  3. Cancel orders and Subcontracts: Cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;
  4. Assign orders and Subcontracts to Owner: Assign to Owner all of the right, title, and interest of Contractor in all orders and subcontracts;
  5. Take action to protect the Work: Take such action as may be necessary or as directed by Owner to preserve and protect the Work, Project site, and any other property related to this Project in the possession of Contractor in which Owner has an interest; and
  6. Continue performance not terminated: Continue performance only to the extent not terminated
- C. Terms of adjustment in Contract Sum if Contract terminated: If Owner terminates the Work or any portion thereof for convenience, Contractor shall be entitled to make a request for an equitable adjustment for its reasonable direct costs incurred prior to the effective date of the termination, plus reasonable allowance for overhead and profit on Work performed prior to termination, plus the reasonable administrative costs of the termination, but shall not be entitled to any other costs or damages, whatsoever, provided however, the total sum payable upon termination shall not exceed the Contract Sum reduced by prior payments. Contractor shall be required to make its request in accordance with the provisions of Part 7.
- D. Owner to determine whether to adjust Contract Time: If Owner terminates the Work or any portion thereof for convenience, the Contract Time shall be adjusted as determined by Owner.

## **PART 10 – MISCELLANEOUS PROVISIONS**

### **10.01 GOVERNING LAW**

Applicable law and venue: The Contract Documents and the rights of the parties herein shall be governed by the laws of the state of Washington. Venue shall be in the county in which Owner's principal place of business is located, unless otherwise specified.

### **10.02 SUCCESSORS AND ASSIGNS**

Bound to successors; Assignment of Contract: Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party shall assign the Work without written consent of the other, except that Contractor may assign the Work for security purposes, to a bank or lending institution authorized to do business in the state of Washington. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations set forth in the Contract Documents.

### **10.03 MEANING OF WORDS**

Meaning of words used in Specifications: Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority,

whether such reference be specific or by implication, shall be to the latest standard specification, manual, or code in effect on the date for submission of bids, except as may be otherwise specifically stated. Wherever in these Drawings and Specifications an article, device, or piece of equipment is referred to in the singular manner, such reference shall apply to as many such articles as are shown on the drawings, or required to complete the installation.

#### **10.04 RIGHTS AND REMEDIES**

No waiver of rights: No action or failure to act by Owner or A/E shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall action or failure to act constitute approval or an acquiescence in a breach therein, except as may be specifically agreed in writing.

#### **10.05 CONTRACTOR REGISTRATION**

Contractor must be registered or licensed: Pursuant to RCW 39.06, Contractor shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27.

#### **10.06 TIME COMPUTATIONS**

Computing time: When computing any period of time, the day of the event from which the period of time begins shall not be counted. The last day is counted unless it falls on a weekend or legal holiday, in which event the period runs until the end of the next day that is not a weekend or holiday. When the period of time allowed is less than 7 days, intermediate Saturdays, Sundays, and legal holidays are excluded from the computation.

#### **10.07 RECORDS RETENTION**

Six year records retention period: The wage, payroll, and cost records of Contractor, and its Subcontractors, and all records subject to audit in accordance with Section 8.03, shall be retained for a period of not less than 6 years after the date of Final Acceptance.

#### **10.08 THIRD-PARTY AGREEMENTS**

No third party relationships created: The Contract Documents shall not be construed to create a contractual relationship of any kind between: A/E and Contractor; Owner and any Subcontractor; or any persons other than Owner and Contractor.

#### **10.09 ANTITRUST ASSIGNMENT**

Contractor assigns overcharge amounts to Owner: Owner and Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, Contractor hereby assigns to Owner any and all claims for such overcharges as to goods, materials, and equipment purchased in connection with the Work performed in accordance with the Contract Documents, except as to overcharges which result from antitrust violations commencing after the Contract Sum is established and which are not passed on to Owner under a Change Order. Contractor shall put a similar clause in its Subcontracts, and require a similar clause in its sub-Subcontracts, such that all claims for such overcharges on the Work are passed to Owner by Contractor.

#### **10.10 HEADINGS AND CAPTIONS**

Headings for convenience only: All headings and captions used in these General Conditions are only for convenience of reference, and shall not be used in any way in connection with the meaning, effect, interpretation, construction, or enforcement of the General Conditions, and do not define the limit or describe the scope or intent of any provision of these General Conditions.

**P A R T III**

**SUPPLEMENTAL CONDITIONS  
AS MODIFIED BY THE CITY OF TACOMA**

**SECTION 00 73 00  
TABLE OF CONTENTS**

<b>PART 1 GENERAL PROVISIONS</b>	<b>3</b>
1.01 DEFINITIONS	3
1.02 ORDER OF PRECEDENCE	4
1.03 EXECUTION AND INTENT	5
1.04 SUBSTITUTIONS	5
1.05 DISQUALIFICATION OF BIDDERS	7
1.06 AWARD OF CONTRACT	7
1.07 MINIMUM EXPERIENCE REQUIREMENTS	8
1.08 UTILITY COORDINATION	8
<b>PART 2 INSURANCE AND BONDS</b>	<b>9</b>
2.01 CONTRACTOR'S LIABILITY INSURANCE	9
2.02 COVERAGE LIMITS	10
2.03 INSURANCE COVERAGE CERTIFICATES	11
2.04 PAYMENT AND PERFORMANCE BONDS	11
2.05 ADDITIONAL BOND SECURITY	11
2.06 BUILDER'S RISK	11
<b>PART 3 TIME AND SCHEDULE</b>	<b>12</b>
3.02 CONSTRUCTION SCHEDULE	12
3.05 DELAY	12
3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION	14
3.08 SUSPENSION OF WORK	15
3.09 MAINTENANCE DURING SUSPENSION	16
3.10 EXECUTION OF CONTRACT – SCHEDULE	17
<b>PART 4 SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS</b>	<b>17</b>
4.03 SHOP DRAWINGS	17
4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS	17
<b>PART 5 PERFORMANCE</b>	<b>17</b>
5.02 PERMITS, FEES AND NOTICES	18
5.04 PREVAILING WAGES	18

5.07	SAFETY PRECAUTIONS.....	18
5.10	UNFORESEEN PHYSICAL CONDITIONS .....	19
5.15	TESTS AND INSPECTION .....	19
5.20	SUBCONTRACTORS AND SUPPLIERS.....	20
5.21	warranty of construction .....	21
5.23	ADJACENT PROPERTIES AND FACILITIES.....	22
	<b>PART 6 PAYMENTS AND COMPLETION .....</b>	<b>22</b>
6.02	SCHEDULE OF VALUES.....	22
6.03	APPLICATION FOR PAYMENT .....	22
6.04	PROGRESS PAYMENTS .....	23
6.07	SUBSTANTIAL COMPLETION .....	24
6.09	FINAL COMPLETION, ACCEPTANCE, AND PAYMENT .....	24
	<b>PART 7 CHANGES.....</b>	<b>25</b>
7.01	CHANGE IN THE WORK .....	25
7.02	CHANGE IN THE CONTRACT SUM.....	26
7.03	CHANGE IN THE CONTRACT TIME .....	29
7.04	DELETED OR TERMINATED WORK.....	30
	<b>PART 8 CLAIMS AND DISPUTE RESOLUTION .....</b>	<b>31</b>
8.01	CLAIMS PROCEDURE .....	31
8.02	ARBITRATION .....	31
8.03	CLAIMS AUDIT .....	32
8.04	AUDIT.....	32
	<b>PART 9 TERMINATION OF THE WORK .....</b>	<b>32</b>
9.01	TERMINATION BY CITY FOR CAUSE .....	32
9.02	TERMINATION BY CITY FOR CONVENIENCE .....	33
	<b>PART 10 MISCELLANEOUS PROVISIONS .....</b>	<b>33</b>

## Section 00 73 00

### **PART 1      GENERAL PROVISIONS**

#### **1.01    DEFINITIONS**

*Replace Article O in Section 1.01 with the following City Supplemental Conditions:*

- O.    "Notice" means a written or electronic notice which has been delivered to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail to the last business address known to the party giving notice.

*Replace Article Q in Section 1.01 with the following City Supplemental Conditions:*

- Q.    "Owner" means the City or its authorized representative with the authority to enter into, administer, and/or terminate the work in accordance with the Contract Documents and make related determinations and findings. *Add the following articles to Section 1.01 of Supplemental Conditions:*
- AB.    "Abbreviations" refer to trade association names and titles of general standards that are frequently abbreviated. Where such acronyms or abbreviations are used in the specifications or other Contract documents, they mean recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations" published by Gale Research Co., available in most libraries.
- AC.    "Alternate Bid" (or Alternate) is an amount stated in the Bid to be added or deducted from the amount of the Base Bid if the corresponding change in project scope or materials or methods of construction described in the Bidding Documents is accepted.
- AD.    "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the work described as the base, to which work may be added or deducted for sums stated in Alternate Bids and Unit Prices. The Base Bid does not include Force Account work and taxes.
- AE.    "Calendar Day" is the 24-hour period from midnight to midnight.
- AF.    "City" is the City of Tacoma.
- AG.    "Contracting Agency" (or City) is the City of Tacoma.
- AH.    "Contract Provisions" is the publication addressing the work required for an individual project. At the time of the call for bids, the Contract provisions may include, for a specific individual project, the general conditions, supplements to the general conditions, the special provisions, a listing of the applicable standard plans, the prevailing minimum hourly wage rates, Contract forms, affirmative action requirements, LEAP and SBE.

- AI. "Engineer" is the City of Tacoma's registered design professional who will act as the City's authorized representative when so designated by the City.
- AJ. "Furnish" is used to mean supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and other.
- AK. "Holiday(s)" means the following calendar days: January 1<sup>st</sup>, 3<sup>rd</sup> Monday of January, 3<sup>rd</sup> Monday of February, last Monday of May, July 4<sup>th</sup>, 1<sup>st</sup> Monday of September, November 11<sup>th</sup>, 4<sup>th</sup> Thursday of November, 4<sup>th</sup> Friday of November, December 25<sup>th</sup>. If a holiday is on a Saturday, the previous Friday will be observed as a holiday. If the holiday is on a Sunday, the following Monday will be observed as a holiday.
- AL. "Indicated" refers to graphic representations, notes or schedules on the drawings, or other paragraphs or schedules in the specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limit on location is intended.
- AM. "Install" is used to describe operations at the project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- AN. "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or Contractor of lower tier for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
- AO. "Provide" means to furnish and install, complete and ready for intended use.
- AP. "Project Site" is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the project. The extent of the project site is shown in the plans and may or may not be identical with the description of the land on which the project is to be built.
- AQ. "Unit Price" is an amount stated in the Bid as a price per unit of measurement for materials or services as described in the Contract Documents.
- AR. "Utility Owner" is used to describe a service, light, power, water, gas, and telecommunications by a public utility.

## **1.02 ORDER OF PRECEDENCE**

*Replace the entire Section 1.02 with the following City Supplemental Conditions:*

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documents precedence in the following order:

- A. Addenda.
- B. Signed Public Works Contract, including any Change Orders, and any Special Forms.
- C. Supplemental Conditions as modified by the City of Tacoma.
- D. General Conditions for Washington State Facility Construction.
- E. Specifications – provisions in Division 1 shall take precedence over provisions of any other Division.
- F. Amendments to Specifications.
- G. Drawings – in case of conflict within the Drawings, large scale drawings shall take precedence over small scale drawings.
- H. Construction Documents Appendices.
- I. Signed and Completed Form of Proposal.
- J. Instructions to Bidders.
- K. Advertisement for Bids.

### **1.03 EXECUTION AND INTENT**

*Replace Section 1.03.2 with the following City Supplemental Conditions:*

- 2. Contractor familiar with project: Contractor has carefully reviewed the Contract Documents, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof;

*Add the following paragraph to Section 1.03 of City Supplemental Conditions:*

The intent of the Contract is to be prescribing a complete work. Omissions from the Contract of details of work, which are necessary to carry out the Contract, shall not relieve the Contractor from performing the omitted work.

### **1.04 SUBSTITUTIONS**

*Add the following new Section 1.04 to General Provisions:*

- A. Approved Equals
  - 1. Unless an item is indicated as "No substitute", special brands, when named, are intended to describe the standard of quality, performance or use desired. Equal items will be considered by the City, provided that the respondent specifies the brand and model, and provides all the descriptive literature, independent test results, product samples, local servicing and parts availability to enable the City to evaluate the proposed "equal".

2. The decision of the City as to what items are equal shall be final and conclusive. If the City elects to purchase a brand represented by the respondent to be an "equal", the City's acceptance of the item is conditioned on the City's inspection and testing after receipt. If, in the sole judgement of the City, the item is determined not to be an equal, the item shall be returned at the respondent's expense.
  3. When the brand name, or level of quality is not stated by the respondent, it is understood the offer is exactly as specified. If more than one brand name is specified, respondent must clearly indicate the brand and model/part number being bid.
- C. Substitution Requests made after Award of Contract: Requests for approval of substitute materials or products will not be considered, except if one or more of the following conditions exists.
1. Indicate one or more reasons why substitution is required with Substitution Request.
    - a. Unavailability: A substitution is required because the specified item is not available, due to factors beyond the control of the Contractor or subcontractor. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
    - b. Unsuitability: Subsequent information or changes disclose inability of the specified item to perform as intended, and where the Contractor certifies that the proposed substitution will overcome such non-performance.
    - c. Regulatory Requirements: Final interpretations of Code, regulatory requirements, safety requirements, or insurance requirements necessitate a change to due inability of the specified item to conform, and the proposed substitution can be approved.
    - d. Warranty: Manufacturer or fabricator cannot certify or warrant performance of specified item as required, and where the Contractor certifies that the proposed substitution will provide the required warranty.
    - e. Owner's Benefit: Acceptance of the proposed substitution is clearly in the Owner's best interest because of cost, quality, or other consideration. In requesting a substitution under this clause, the Contractor shall furnish substantiation of any such reason.
  2. During the construction period, Contractor will be notified in writing of decision to accept or reject the Substitution Request by the Owner. Permission to make any substitution after award of Contract shall be effected by a Change Order.
  3. The Contractor shall accompany any request for substitution with such drawings, specifications, samples, manufacturer's literature, performance

data, and other information necessary to describe and evaluate the proposed substitution completely. The burden of proof shall be on the Contractor.

4. Redesign and Coordination: In making request for approval of substitute materials, the Contractor must represent that it has investigated the proposed product and, in its opinion, it is equal or equivalent in all respects to that specified. Also, Contractor will coordinate all trades including changes thereto as may be required, that it waives all claims for additional costs which subsequently.

## **1.05 DISQUALIFICATION OF BIDDERS**

*Add the following new Section 1.06 to City Supplemental Conditions:*

- A. A bidder may be deemed not responsible and the proposal rejected by the City for any of the following:
  1. More than one proposal is submitted for the same project from a bidder under the same or different name;
  2. Evidence of collusion exists with any other bidder. Participants in collusion will be restricted from submitting further bids;
  3. A bidder is not pre-qualified for the work or to the full extent of the bid;
  4. An unsatisfactory performance record exists based on past or current work;
  5. There is uncompleted work which might hinder or prevent the prompt completion of the work bid upon;
  6. The bidder failed to settle bills for labor or materials on past or current Contracts;
  7. The bidder has failed to complete a written public Contract or has been convicted of a crime arising from a previous public Contract;
  8. The bidder is unable, financially or otherwise, to perform the work;
  9. A bidder is not authorized to do business in the state of Washington;
  10. Failure by the Contractor to properly review the project documents and/or site;
  11. Bid Evaluation Submittals are not provided in the time specified;
  12. The Contractor fails to meet the SBE requirements as described in these documents;
  13. Receipt of addenda is not acknowledged; or
  14. There are any other reasons deemed proper by the City.
15. Contractor has altered in any form or fashion the City's bid proposal form

## **1.06 AWARD OF CONTRACT**

*Add the following new Section 1.06 to City Supplemental Conditions:*

- A. The Owner reserves the right to Award, in any order or combination, such Additives, Deductives, or Alternates, as may be set forth in the Bid Forms.

### **1.07 MINIMUM EXPERIENCE REQUIREMENTS**

*Add the following new Section 1.07 to the City Supplemental Conditions:*

The Bidder shall submit if required as part of its bid submittal package the necessary information on the Statement of Qualifications Project Experience Form to demonstrate compliance with the minimum experience requirements. The City reserves the right to request for clarifying or additional information.

### **1.08 UTILITY COORDINATION**

*Add the following new Section 1.08 to City Supplemental Conditions:*

- A. The Contractor shall coordinate his/her work with all utilities and other organizations, which have their facilities within the project area. A Utility coordination meeting with all the utility organization shall be coordinated. These may include but are not limited to
  1. City of Tacoma Water Division, Contact: Gary Gates, Phone: 253-502-8742
  2. City of Tacoma Power Division, Contact: Daniel Pitsch, Phone: 253-502-8229
  3. City of Tacoma Sewer Utility, Contact: Merita Trohimovich Pollard, Phone: 253-502-2103
  4. Puget Sound Energy, Contact: Greg Potter, Phone: 253-841-6242 ext. 10
  5. Century Link , Contact: Judy Cissell, Phone: 206-733-8860
  6. One Call Locators Service: 1-800-424-5555
  7. Comcast communications: Contact: Customer Service, Phone: 877-824-2288
- B. The Contractor is responsible for location of private underground utilities within the private property which are not maintained by an outside utility company, and which are not located through the One Call Locators Service.
  1. The Contractor shall provide and pay for private locator service to locate private utilities.

### **1.09 TRAFFIC CONTROL**

*Add the following new Section 1.09 to City Supplemental Conditions:*

- A. All road closures, obstructions, or detours will require approval by the Owner. The Contractor must submit a written request 24-hours in advance of any planned work that will impact a roadway. There is no guarantee that such request will be granted.
- B. The design, construction, and maintenance of all detours, including traffic control, traffic control signage, and ADA access and pedestrian access is the sole

responsibility of the Contractor. This includes detours both outside the limits of the project and within the limits of the project.

- C. For any road closures, obstructions, or detours, the Contractor shall submit a traffic control plan for approval by the Owner. The detour plan shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), state standard specifications, and these specifications.
- D. The Contractor shall be responsible for obtaining all permits necessary to implement the traffic control plan.

## **PART 2 INSURANCE AND BONDS**

### **2.01 CONTRACTOR'S LIABILITY INSURANCE**

General insurance requirements: Prior to commencement of the Work, Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Owner that such insurance has been procured. Review of the Contractor's insurance by Owner shall not relieve or decrease the liability of Contractor. Companies writing the insurance to be obtained by this part shall be licensed to do business under Chapter 48 RCW or comply with the Surplus Lines Law of the State of Washington. Contractor shall include in its bid the cost of all insurance and bond costs required to complete the base bid work and accepted alternates. Insurance carriers providing insurance in accordance with the Contract Documents shall be acceptable to Owner, and its A.M. Best rating shall be indicated on the insurance certificates. A.M. Best Rating shall not be lower than A(-) VII.

*Replace Section 2.01.A of Insurance and Bonds with the following City Supplemental Conditions:*

- A. Term of insurance coverage: Contractor shall maintain the following insurance coverage during the Work and for two years after Final Completion. Contractor shall also maintain the following insurance coverage during the performance of any corrective Work required by Section 5.16.
  - 1. Commercial General Liability Insurance shall be written on an Insurance Services Office form CG0001 (04 13) or the equivalent. Coverage shall include, but not be limited to:
    - a. Completed operations/products liability;
    - b. Explosion, collapse, and underground;
    - c. Employer's liability coverage..
  - 2. Automobile Liability Insurance on shall be written on an insurance Services office form CA0001 or the equivalent. Contractor must also maintain an MCS 90 endorsement of equivalent and a CA 9948 endorsement or equivalent if "Pollutants" are to be transported.

- B. Industrial insurance compliance: Contractor shall comply with the Washington State.
- C. Insurance to protect the following:
- D. Owner as Additional Insured: All insurance coverages shall be endorsed to include City as an additional insured for both ongoing and completed operations using Insurance Services Office Forms CG2010 and CG2037 or the equivalent for Work performed in accordance with the Contract Documents, and all insurance certificates shall be accompanied with the policy endorsement showing the City as an additional insured. Contractor's insurance shall be primary and non-contributory with any insurance or self- insurance maintained by the City and contain a "separation of insured" provision and a "waiver of subrogation" clause favor of City of Tacoma (Owner)

*Add the following new Section 2.01.E to City Supplemental Conditions:*

- E. Any additional coverage specifically required within the project manual.

## **2.02 COVERAGE LIMITS**

*Replace Section 2.02 with City Supplemental Conditions:*

### Commercial General Liability:

\$1,000,000 Each Occurrence, \$2,000,000 General Aggregate

\$2,000,000 Products-Completed Operations Aggregate

\$1,000,000 Personal Injury & Advertising Injury

### Employers Liability:

\$1,000,000 each employee

\$1,000,000 each accident

\$1,000,000 policy limit

### Commercial Automobile Liability:

\$1,000,000 each accident for any vehicle for bodily injury and property damage.

### Workers Compensation: Statutory

### Professional Liability:

\$1M per claim and \$2M in the aggregate

## **2.03 INSURANCE COVERAGE CERTIFICATES**

*Add the following Articles to Section 2.03 with City Supplemental Conditions:*

D. The following shall be required:

1. The Contractor shall furnish acceptable proof of insurance coverage on an Acord Certificate of insurance or the equivalent.
2. A copy of the additional insured endorsements must accompany the insurance certificate. A copy of each of the endorsement are required. Additional insured primary and non-contributory, and waiver of subrogation..

E. The following additional requirements apply:

1. Contractor shall provide with the certificate, evidence of the amount of any deductible or self-insured retention under the policy.
2. It is the Contractor's responsibility to keep an up-to-date Certificate of Insurance on file with the City throughout the contract and must provide 30 day notice of any cancellation.

G. All Insurance coverage the Contractor is required to maintain under this Article shall be written on an "occurrence" basis and not on a "claims made" basis.

## **2.04 PAYMENT AND PERFORMANCE BONDS**

*Replace the entire Section 2.04 with the following City Supplemental Conditions:*

A Performance Bond shall be obtained by the Contractor utilizing the form entitled "Performance Bond to the City of Tacoma" as found at the front of the Contract Document under "Contract Forms". Contractor shall provide a Performance Bond, including power of attorney, for 100 percent of the amount of his/her bid (including sales tax) per RCW 39.08 securing performance of work; all Contract obligations; materials, payment of laborers, Manufacturers and subcontractors.

In the event that the Contractor intends to have a subcontractor perform all or any portion of the project, the Contractor should consider requiring its own performance bond from the subcontractor to guarantee successful performance of this project component.

## **2.05 ADDITIONAL BOND SECURITY**

*Add Section 2.05 with the following City Supplemental Conditions:*

D. The Contract amount is increased by 20% or more.

## **2.06 BUILDER'S RISK**

*Add Section 2.06.A with the following City Supplemental Conditions:*

- A. For projects not involving New Building Construction, 'Installation Floater' is an acceptable substitute for the Builder's Risk Insurance.

*Add the following provisions Article B of Section 2.06 of Insurance and Bonds:*

- B. Reasonable compensation for A/E services and expenses required as a result of an insured loss shall not exceed \$300,000.00. Any deductible provision in the Builder's Risk Insurance will be paid for by the City, but shall not exceed \$10,000.00. Flood, earthquake, and terrorism insurance are not required under this Contract.

## **PART 3      TIME AND SCHEDULE**

### **3.02    CONSTRUCTION SCHEDULE**

*Replace Article C Section 3.02 with the following City Supplemental Conditions:*

- C. Owner comments on Progress Schedule: Owner shall return comments on the preliminary Progress Schedule to Contractor within 7 Days of receipt. Review by Owner of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Owner may withhold a portion of progress payments until a Progress Schedule has been submitted which meets the requirements of this section.

*Replace Section 3.02.D with the following City Supplemental Conditions:*

- D. Submit a revised Progress Schedule that includes a three (3) week ahead scheduled work with each pay application, or as directed by the City, indicating but not limited to:

PART 1 Actual starts and finishes of activities and changes in slack or float, lags and leads for each item;

PART 2 Percent complete;

PART 3 Changes in network logic.

Content of each revised Progress Schedule shall be the same information required in Section 3.02.B above.

- a. Problem areas; anticipated delay; and impact of these on Schedule.
- b. Report corrective action taken, or proposed, and its effect.
- c. Should actual progress fall more than two (2) weeks behind the progress identified in the Target Schedule, the Contractor shall explain the cause and will take the necessary steps to alter the construction schedule to comply with the Contract Completion date.

Payment will not be made until Progress Schedule revisions are up to date and accurate.

### **3.05    DELAY**

*Replace the entire Section 3.05 with the following City Supplemental Conditions:*

- A. Avoidable delays in the prosecution or completion of the Work shall include all delays that might have been avoided by the exercise of care,

prudence, foresight, or diligence on the part of the Contractor. Avoidable delays may include, but are not limited to:

1. Reasonable loss of time resulting from the necessity of submitting drawings to the City for acceptance,
2. Collecting survey/field/analytical information,
3. Site management and coordination,
4. Measurements and inspections,
5. Subcontractor management, and
6. Such interruptions as may occur in the prosecution of the Work on account of the reasonable interference of other Contractors employed by the City,

These delays, which may interrupt the prosecution of parts of the Work, while at the time may be unavoidable but do not necessarily prevent or delay the prosecution of other parts of the Work, or prevent the completion of the whole Work within the time herein specified, will be deemed avoidable within the meaning of this Contract.

- B. Unavoidable delays in the prosecution of completion of the Work under this Contract shall include all delays which may result through causes beyond the control of the Contractor, and which he could not have provided against by the exercise of care, prudence, foresight, or diligence. Unavoidable delays shall hereinafter be referred to as "Force Majeure".

Force Majeure includes, but is not limited to:

1. Acts of God or the public enemy;
2. Acts or omissions of any government entity;
3. Fire or other casualty for which Contractor is not responsible;
4. Quarantine or epidemic;
5. Strike or defensive lockout;
6. Orders issued by the Owner, changing the amount of Work to be accomplished in excess of 25% per single change.
7. Failure of the Owner to provide rights-of-entry.

These delays shall be considered unavoidable so far as they necessarily interfere with the Contractor's completion of the whole Work.

- D. Whenever the Contractor foresees any delay in the prosecution of the Work, and in any event immediately upon the occurrence of any such delay, the Contractor shall submit a written notice to the City as provided in Section 7.02 of the General Conditions. The City may determine whether the delay is to be considered avoidable or unavoidable ("Force Majeure"), how long it continues, and to what extent the prosecution and completion of the Work are to be delayed thereby.

Contractor may be entitled to an equitable adjustment in the Contract Sum, if

the cost or time of Contractor's performance is changed due to the fault or negligence of City, provided the Contractor makes a request according to sections 7.02 and 7.03.

After the completion of any part or the whole of the Work, the City, in approving the amount due the Contractor, will assume that any and all delays which have occurred in its prosecution and completion have been avoidable, except such delays as shall have been called to the attention of the City in writing as per Section 7.02 at the time of their occurrence, and later found by the City to have been unavoidable. The Contractor shall make no claims that any delay not called to the attention of the City, in writing, at the time of its occurrence has been an unavoidable delay ("Force Majeure").

- E. For delays which are unavoidable ("Force Majeure"), as determined by the City, an extension of time beyond the time specified for completion will be allowed, within which to complete the Contract. The Contractor will not be charged, because of any extension of time for such unavoidable delay, any liquidated damages or engineering and related costs, as are charged in the case of avoidable delays. Contractors overhead cost associated with "Force Majeure" are excluded from equitable adjustment.
- F. If the Work called for under this Contract is not finished and completed by the Contractor, in all parts and in accordance with all requirements in the time specified, including extensions of time granted because of an unavoidable delay; the Contractor will be charged liquidated damages, or direct engineering and related costs as provided for in the Standard Specifications.  
  
In addition, the City shall charge to the Contractor, and may deduct from the [mal payment for the Work, all engineering and related costs incurred by the City in connection with the Work during the period of such extension or extensions. The City shall make the final determination as to the appropriateness of charges required to complete the Work.
- G. The granting of any extension of time on account of delays, which in the judgment of the City are avoidable delays, shall in no way operate as a waiver on the part of the City of its rights under this Contract.

### **3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION**

*Add Section 3.07.A to City Supplemental Conditions:*

- (a) Time is of the essence on the Contract. Delays inconvenience the City's daily operation and add undue time and cost required for administration, engineering, inspections, and supervision. Accordingly, the Contractor agrees:
  - 1. To Pay (according to the following formula) liquidated damages for each calendar day beyond the number of days established for final completion, and

2. To authorize the City to deduct these liquidated damages from any money due or coming due to the Contractor.

#### LIQUIDATED DAMAGES FORMULA

$$LD = \frac{0.20C}{T}$$

Where: LD = liquidated damages per calendar day (rounded to nearest dollar)

C = original contract amount for Work Order

T = original time for final completion

When the contract work has progressed to the extent that the City has full use and benefit of the facilities, both from the operational and safety standpoint, and only minor incidental work, replacement of temporary substitute facilities, or correction or repair remains to physically complete of the total contract, the City may determine the work is substantially complete. The City 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 as 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 actual final completion date of all the contract work. The Contractor shall complete the remaining work as promptly as possible.

### 3.08 SUSPENSION OF WORK

*Add Section 3.08 to City Supplemental Conditions:*

- A. The City may order suspension of all or any part of the work if:
  1. The Contractor does not comply with the contract or the City's orders.
- B. When ordered by the City to suspend or resume work, the Contractor shall do so immediately.
- C. If the work is suspended for reason (1) above, the period of work stoppage will be counted as calendar days maintaining the original contract completion requirement. The lost work time, however, shall not relieve the Contractor from any Contract responsibility.
- D. If the work is suspended for reason (2) above, the period of work stoppage will be counted as working days. The lost work time, however, shall not relieve the Contractor from any contract responsibility.
- E. If the performance of all or any part of the work is suspended, delayed, or interrupted for an unreasonable period of time by an act of the Contracting Agency in the administration of the Contract, or by failure to act within the time specified in the Contract (or if no time is specified), the City will make an adjustment for any increase

in the cost or time for the performance of the Contract (excluding profit, overhead, home office expense, supervisory personnel labor not specifically assigned to the project) necessarily caused by the suspension, delay, or interruption. However, no adjustment will be made for any suspension, delay, or interruption if (1) the performance would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or (2) an equitable adjustment is provided for or excluded under any other provision of the Contract.

- F. If the Contractor believes that the performance of the work is suspended, delayed, or interrupted for an unreasonable period of time and such suspension, delay, or interruption is the responsibility of the Contracting Agency, the Contractor shall immediately submit a written request for equitable adjustment to the Engineer as provided in Section 7.02. No adjustment shall be allowed for any costs incurred more than 2 calendar days before the date the Engineer receives the Contractor's written request for equitable adjustment. If the Contractor contends damages have been suffered as a result of such suspension, delay, or interruption, the protest shall not be allowed unless the request for equitable adjustment (stating the amount of damages) is asserted in writing within 14 calendar days of end of the delay. The Contractor shall keep full and complete records of the costs and additional time of such suspension, delay, or interruption and shall permit the Engineer to have access to those records and any other records as may be deemed necessary by the Engineer to assist in evaluating the protest.
- G. The City will determine if an equitable adjustment in cost or time is due as provided in this section. The equitable adjustment for increase in costs, if due, shall be subject to the limitations provided in Section 7.02, provided that no profit of any kind will be allowed on any increase in cost necessarily caused by the suspension, delay, or interruption.
- H. Request for extensions of time will be evaluated in accordance with Section 7.03.
- I. No claim by the Contractor under this clause shall be allowed unless the Contractor has followed the procedures provided in this Section and Sections 7.02 and 7.03.
- J. Contractor shall notify surety of all claims.

### **3.09 MAINTENANCE DURING SUSPENSION**

*Add Section 3.09 with City Supplemental Conditions:*

- A. Before and during any suspension (as described in Section 3.08) the Contractor shall protect the work from damage or deterioration. Suspension shall not relieve the Contractor from anything the Contract requires unless this section states otherwise.
- B. After any suspension, the Contractor shall retain all responsibilities the Contract assigns for repairing or restoring the construction area to the requirement of the plans.

### **3.10 EXECUTION OF CONTRACT – SCHEDULE**

*Add Section 3.10 to City Supplemental Conditions:*

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 5 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification and a satisfactory bond as required.

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 5 calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 2 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

## **PART 4 SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS**

### **4.03 SHOP DRAWINGS**

*Replace Section 4.03.E with City Supplemental Conditions:*

*E. Contractor to submit Shop Drawings electronically: Unless otherwise provided in Division 1, Contractor shall submit to Owner for approval Shop Drawings electronically through e-Builder.*

*Add Section 4.03.F with City Supplemental Conditions:*

F. The Contractor shall submit a submittal schedule with dates for Shop Drawings within 7 Calendar Days of issuance of Notice To Proceed.

### **4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS**

*Add Section 4.05.E with City Supplemental Conditions:*

E. The Contractor may pick up, at their own cost, additional plans and specifications from ARC located at 632 Broadway, Tacoma, Washington 98402 or by going to <http://www.nwcontractorsnetwork.com>.

## **PART 5 PERFORMANCE**

## **5.02 PERMITS, FEES AND NOTICES**

*Add Section 5.02.A with City Supplemental Conditions:*

- A. The actual cost of the general building permit shall be paid directly to the permitting agency by the City.

## **5.04 PREVAILING WAGES**

*Add Section 5.04.H with City Supplemental Conditions:*

- H. Copies of approved Intents to Pay Prevailing Wages for the Contractor and all subcontractors shall be submitted with the Contractor's first application for payment. As additional subcontractors perform work on the project, their approved Intent forms shall be submitted with the Contractor's next application for payment.
  - 1. The Contractor and all subcontractors shall promptly submit to the City certified payroll copies if requested, with the second pay application.
  - 2. The City of Tacoma reserves the right to withhold payment if the Contractor does not provide copies of Certified Payroll with each application of payment.

## **5.07 SAFETY PRECAUTIONS**

*Replace Section 5.07.A with City Supplemental Conditions:*

- B. In performing this Contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoid work interruptions. For these purposes, the Contractor shall:
  - 1. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the Contractor and each subcontractor on the work site. The Contractor shall submit a site-specific safety plan to the City's representative prior to the initial scheduled construction meeting.
  - 2. Provide adequate safety devices and measures including, but not limited to, the appropriate safety literature, notice, training, permits, placement and use of barricades, signs, signal lights, ladders, scaffolding, staging, runways, hoist, construction elevators, shoring, temporary lighting, grounded outlets, wiring, hazardous materials, vehicles, construction processes, and equipment required by Chapter 19.27 RCW, State Building Code (Uniform Building, Electrical, Mechanical, Fire, and Plumbing Codes); Chapter 212-12 WAC, Fire Marshal Standards, Chapter 49.17 RCW, WISHA; Chapter 296-155 WAC, Safety Standards for Construction Work; Chapter 296-65 WAC; WISHA Asbestos Standard; WAC 296-62-071, Respirator Standard; WAC 296-62, General Occupation Health Standards, WAC 296-24, General Safety and Health Standards, WAC 296-24, General Safety and Health Standards, Chapter 49.70 RCW, and Right to Know Act.

3. Comply with the State Environmental Policy Act (SEPA), Clean Air Act, Shoreline Management Act, and other applicable federal, state, and local statutes and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources.
4. Post all permits, notices, and/or approvals in a conspicuous location at the construction site.
5. Provide any additional measures that the City determines to be reasonable and necessary for ensuring a safe environment in areas open to the public. Nothing in this part shall be construed as imposing a duty upon the City or A/E to prescribe safety conditions relating to employees, public, or agents of the Contractors.
6. All construction personnel shall wear highly visible reflective vests and hardhats while on North End Treatment Plant property.

#### **5.10 UNFORESEEN PHYSICAL CONDITIONS**

*Replace Section 5.10.A with City Supplemental Conditions:*

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than 2 Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.

#### **5.15 TESTS AND INSPECTION**

*. Replace Section 5.15.A with City Supplemental Conditions:*

- A. The City will enlist and pay for the services of a qualified testing agency to provide quality control, third party testing, and special inspection services as stated specifically in Division 01 and Technical Specifications of the Project Specifications. All other testing or inspecting shall be by Contractor's 3<sup>rd</sup> Party Agency and paid for by Contractor.
  1. Tests and Inspections shall include the following minimum requirements:
    - a. Preparatory Inspection (pre-installation meetings): This shall be performed prior to beginning any work and shall include:
    - b. A review of applicable specifications;
    - c. A review of the Contract plans;
    - d. A check to assure that all materials and/or equipment have been tested, submitted and approved;
    - e. A check to assure that provisions have been made to provide control inspection and testing;

- f. Examination of the work area to assure that all required preliminary work has been completed and is in Contract compliance;
- g. A physical examination of required materials, equipment and sample work to assure that they conform to approved shop drawings or submitted data and are properly stored;
- h. Discussion of procedures for constructing the work, including repetitive deficiencies, construction tolerances and workmanship standards specified in the documents.
- i. Initial Inspection: This shall be performed as soon as work begins on a definable feature of work and the following shall be accomplished:
- j. A check of preliminary work to ensure that it is in Contract compliance and review of the preparatory meeting minutes;
- k. Verification of full Contract compliance and verify that required control inspection and testing is underway;
- l. Establish level of workmanship, verify that it meets minimum acceptable workmanship standards, and compare work with sample panels, etc., as appropriate;
- m. Resolve all differences;
- n. This inspection phase shall be repeated for each new crew on site performing the work, or any time standards are not being met.
- o. Follow-Up Inspections: These follow up inspections shall be performed daily to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The City or City's representative may require joint Contractor inspections at any time and on a periodic basis to evaluate the effectiveness of the quality control system.
- p. Tests: All operation and acceptance tests, where specified, are to be performed to verify control measures are adequate.
- q. Costs for re-testing work that was previously tested but did not meet the requirements for the work shall be the responsibility of the Contractor.

## **5.20 SUBCONTRACTORS AND SUPPLIERS**

*Replace Section 5.20.B with City Supplemental Conditions:*

- B. The Contractor shall submit the Request for Sublet Form provided by the City of Tacoma for every subcontractor used on the project prior to construction. Contractor shall not utilize any subcontractor or manufacturer to whom the City has a reasonable objection, and shall obtain City's written consent before making any substitutions or additions.

*Add Section 5.20.F, 5.20.G, 5.20.H, 5.20.I with City Supplemental Conditions:*

- F. The LEAP and EIC Programs have been adopted by the City to counteract economic and social ills, which accompany high rates of unemployment within the City of Tacoma.
  - 1. The Tacoma City Council established the LEAP Program for Public Works Contracts pursuant to City of Tacoma Ordinance No. 26301. The primary

goal for this program is to provide an opportunity for City of Tacoma and Empowerment Zone/Enterprise Community residents to acquire skills, enter Apprenticeship Programs, and perform work that provides living wages.

2. The Tacoma City Council established the EIC Program for Public Works Contracts pursuant to City of Tacoma Ordinance No. 28625. The primary goal for this program is to ensure equitable participation of historically under-utilized business enterprises, by establishing goals for their utilization in public Contracting.
- G. The Contractor shall not subcontract work unless the City approves in writing. Each request to subcontract shall be on the form the City provides. The subcontractor shall be a licensed State of Washington Contractor and shall have a valid City of Tacoma business license. If the City requests, the Contractor shall provide proof that the subcontractor has the experience, ability, and equipment the work requires. The City will approve the request only if satisfied with the proposed subcontractor's record, equipment, experience, and ability. Approval to subcontract shall not:
- a. Relieve the Contractor of any responsibility to carry out the Contract;
  - b. Relieve the Contractor of any obligations or liability under the Contract and the Contractor's bond;
  - c. Create any Contract between the Contracting Agency and the subcontractor; or
  - d. Convey to the subcontractor any rights against the Contracting Agency.
- H. The Contracting Agency will not consider the following as subcontracting:
- e. Purchase of sand, gravel, crushed stone, crushed slag, batched concrete aggregates, ready mix concrete, off-site fabricated structural steel, other off-site fabricated items, and any other materials supplied by established and recognized commercial plants
- I. If City determines that any subcontractor is performing services in an unsatisfactory manner or is not completing the Work in accordance with the requirements of the Contract Documents or is otherwise undesirable or unacceptable, City will by written notice so notify Contractor. Contractor shall then take immediate steps to rectify and correct the situation. If City and Contractor mutually agree such actions are ineffective or infeasible, Contractor shall terminate such subcontractor. Subcontracting by subcontractors will be subject to the same regulations.

## **5.21 WARRANTY OF CONSTRUCTION**

*Add Section 5.21.D with City Supplemental Conditions:*

- D. Warranties shall commence upon issuance of Substantial Completion.

*Add Section 5.23 with City Supplemental Conditions:*

### **5.23 ADJACENT PROPERTIES AND FACILITIES**

- A. Contractor shall be responsible for negotiations of any waivers or alternate arrangements required to enable transportation of materials to the site at the Contractors expense. The Contractor shall provide City with any written agreements as a matter of record only.
- B. Maintain conditions of access road to site such that access is not hindered as the result of construction related deterioration.

## **PART 6 PAYMENTS AND COMPLETION**

### **6.02 SCHEDULE OF VALUES**

*Add Section 6.02 with City Supplemental Conditions:*

Subcontracted Work shall be paid to the Contractor on the basis of Contractor's actual cost of amounts properly paid to such subcontractors. A Schedule of Values shall be submitted for the Work of each subcontractor, as well as suppliers providing materials in excess of \$2,500.00. The total for all progress payments shall not exceed the Contract Sum, as may be adjusted by Change Orders. The General Contractor shall provide a schedule of values for Lump Sum bid items for review and acceptance.

The General Contractor shall be required to submit signed lien waivers by Corporate Office for all parties. The General Contractor shall submit the anticipated cash flow for the project and update monthly.

### **6.03 APPLICATION FOR PAYMENT**

*Replace Article B in Section 6.03 with the following City provision:*

- B. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.011, as their interests appeared in the last preceding certificate of payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Section 1.03 are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment . Contractor shall submit application for payment on AIA form G702/G703, with modifications made for payment certification. Payment shall be certified by a corporate officer of the Contractor.

*Replace Article D In Section 6.03 with the following City provision:*

- D. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. No payment will be made for material stored at an alternate location. The Contractor shall comply with or furnish satisfactory evidence of the following:

*Delete items 1 through 8 of Article D of Section 6.03 of Payments and Completion and replace with the following:*

- 1 Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and
2. Title: Title to all Work and materials covered by an accepted and paid Application For Payment shall pass to the Owner at the time of such payment, free and clear of all liens, claims, security interest, and encumbrances. Passage of title shall not, however, (1) relieve Contractor from any of its duties and responsibilities for the Work or materials, (2) waive any rights of the Owner to insist on full compliance by Contractor with the Contract requirements, or (3) constitute acceptance of the Work or materials

#### **6.04 PROGRESS PAYMENTS**

*Add Section 6.04.E with City Supplemental Conditions:*

##### E. Taxes.

Unless otherwise required in this Specification, applicable federal, state, city and local taxes shall be included in the submittal as indicated below. The total cost to the City, including all applicable taxes, may be the basis for Contract award determination. As used herein, the term "taxes" shall include any and all taxes, assessments, fees, charges, interest, penalties, and/or fines imposed by applicable laws and regulations in connection with the procurement of goods and/or services hereunder.

##### **1. Federal Excise Tax**

The City of Tacoma is exempt from federal excise tax. The City will furnish a Federal Excise Tax Exemption certificate, if required. If the Respondent fails to include applicable tax in its submittal, then Respondent shall be solely responsible for the payment of said tax.

##### **2. State and Local Sales Tax**

The City of Tacoma is subject to Washington state sales tax. It is the Respondent's obligation to state the correct sales tax percentage and include the applicable Washington state, city, and local sales tax as a separate line item(s) in the submittal.

##### **3. City of Tacoma Business and Occupation Tax**

It is the Respondent's obligation to include City of Tacoma Business and Occupation tax in the unit and/or lump sum prices submitted; it shall not be shown separately on the submittal.

Per Sub-Title 6A of the City of Tacoma Municipal Code, transactions with the City of Tacoma may be subject to the City's Business and Occupation Tax.

It is the responsibility of the Respondent awarded the Contract to register with the City of Tacoma's Tax and License Division, 733 South Market Street,

Room 21, Tacoma, WA 98402-3768, telephone (253) 591-5252, website <http://www.cityoftacoma.org/Page.aspx?nid+201>.

#### **4. Any or All Other Taxes**

Any or all other taxes are the responsibility of the Respondent unless otherwise required by law.

### **6.07 SUBSTANTIAL COMPLETION**

*Add Section 6.07.A with City Supplemental Conditions:*

A. The prerequisites for issuance of a Certificate of Substantial Completion by the City are as follows:

1. Submit the final progress payment showing 100% completion for the work being claimed as substantially complete. List any incomplete items of work along with their value and an explanation of why the work is incomplete.
2. Coordinate with the City for changeover of all insurance coverage.
3. Submit all warranties, guarantees, maintenance agreements, and workmanship/warranty bonds as required by the Contract Documents.
4. Deliver all tools, spare parts, "Attic Stock" and other deliverables to the City as required by the Contract Documents.
5. Submit Record Drawings as required by the Contract Documents
6. Perform all work as required to obtain a Certificate of Occupancy.
7. Punch List Procedures
  - i. Prior to Substantial Completion (approximately 10 working days) Contractor provide its own initial Punch List (List of Deficiencies) for the Owner's review. Owner shall review and make edits as they deem appropriate. The List of Deficiencies will be sent back to the Contractor for the Contractor to perform the work. The Contractor must complete the work in a satisfactory manner before the Owner will accept.

### **6.09 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT**

*Add Section 6.09.A with City Supplemental Conditions:*

A. Final Completion shall be the same as Physical Completion.

*Add Section 6.09.D with City Supplemental Conditions:*

D. Prerequisites for Final Acceptance

1. Obtain the City's written approval that all items on the List of Deficiencies as prepared by the Contractor have been completed.
2. Submit consent of Surety. Provide the standard form of the surety company or submit consent using the AIA Document G-707 form.

3. Submit all Record Drawings and Record Specifications.
4. Complete final clean up and repair of items damaged during construction.
5. Reinsertion Procedure
  - i. Upon receipt of the Contractor's Notice that work on the List of Deficiencies has been completed, the City will visit the site to determine if the work has progressed to an acceptable level of quality justifying a final inspection. If Contractor's work is acceptable and complete the Owner shall issue written acceptance of corrections so stated on List of Deficiencies.

## **PART 7      CHANGES**

### **7.01   CHANGE IN THE WORK**

*Replace Section 7.01.B with City Supplemental Conditions:*

- B. If City desires to order a change in the Work, it may request a written Change Order proposal from Contractor. Contractor shall submit a Change Order proposal within 7 days of the request from City, or within such other period as mutually agreed. Contractor's Change Order proposal shall be full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work.

*Replace Section 7.01.E with City Supplemental Conditions:*

- E. Failure to agree upon terms of Change Order; Final offer and Claims: If Owner and Contractor are unable to reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, Contractor may at any time in writing, request a final offer from Owner. Owner shall provide Contractor with its written response within 14 Days of Contractor's request. Owner may also provide Contractor with a final offer at any time. If Contractor rejects Owner's final offer, or the parties are otherwise unable to reach agreement, Contractor's only remedy shall be to file a Claim as provided in Part 8.

*Add Section 7.01.G with City Supplemental Conditions:*

#### **G. Change Order Documentation**

1. A log will be maintained by the Contractor subject to review and comment by Owner for each of the documents identified in this section leading up to issuances of Change Order. These logs will record transmittals, suspense dates, review stopovers, dates of actions, and other specific pertinent information to track the progress of the subject

documents. The Owner reserves the right to dispute any and all entries to which the Contractor shall include in said log.

2. The City reserves the right to include and exclude as many Requests for Proposals and or Change Order Proposals into one Change Order as the City determines is in its best interest.

## **7.02 CHANGE IN THE CONTRACT SUM**

*Replace Section 7.02.A.2(b) and (c) with City Supplemental Conditions:*

- (b) Content of notice for equitable adjustment; Failure to comply: Contractor shall not be entitled to any adjustment in the Contract Sum for any occurrence of events or costs that occurred more than 2 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Sum; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Sum requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
- (c) Contractor to provide supplemental information: Within 14 Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with subparagraph a. above with additional supporting data. Such additional data shall include, at a minimum: the amount of compensation requested, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the damages claimed, but that the damages claimed were actually a result of the act, event, or condition complained of and that the Contract Documents provide entitlement to an equitable adjustment to Contractor for such act, event, or condition; and documentation sufficiently detailed to permit an informed analysis of the request by Owner. When the request for compensation relates to a delay, or other change in Contract Time, Contractor shall demonstrate the impact on the critical path, in accordance with Section 7.03C. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

*Replace Section 7.02.B.4 with City Supplemental Condition:*

4. Markups on additive and deductive Work: The cost of any additive or deductive changes in the Work shall be calculated as set forth below, except that overhead

and profit shall not be included on deductive changes in the Work unless deductive change exceeds \$10,000.

Where a change in the Work involves additive or deductive Work by the same Contractor or Subcontractor, small tools, overhead, profit, bond and insurance markups will apply to the net difference.

*Replace Section 7.02.B.7.a(1) with City Supplemental Conditions:*

1. Basic wages and benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved "statement of intent to pay prevailing wages" or a higher amount if approved by the City only if supported by certified payrolls. Direct supervision shall be a reasonable percentage not to exceed 10% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.

*Delete Section 7.02.B.7.a(4) in its entirety.*

*Replace Section 7.02.B.7.d with City Supplemental Conditions:*

Allowance for small tools, expendables & consumable supplies: Small tools consist of tools which cost \$250 or less and are normally furnished by the performing contractor.

The maximum rate for small tools shall not exceed the following:

- A. 1% for Contractor: For Contractor, 1% of direct labor costs.
- B. 2% for Subcontractors: For Subcontractor, 2% if direct labor costs.

Expendables and consumables supplies directly associated with the change in Work must be itemized.

*Replace Section 7.02.B.7.f(1)(a) with City Supplemental Conditions, Projects less than \$3 million:*

- a. Contractor markup on Contractor Work for Overhead: For Contractor, for any Work actually performed by Contractor's own forces, 10% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.

*Replace Section 7.02.B.7.f(1)(b) with City Supplemental Conditions, Projects less than \$3 million:*

- b. Subcontractor markup for Subcontractor Work for Overhead: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 12% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.

*Replace Section 7.02.B.7.f(1)(c) with City Supplemental Conditions, Projects less than \$3 million:*

- c. Contractor markup for Subcontractor Work: For Contractor, for any work performed by its Subcontractor(s) 6% of the first \$50,000 of the amount due each Subcontractor, and 4% of the remaining amount, if any.

*Replace Section 7.02.B.7.f(1)(d) with City Supplemental Conditions, Projects less than \$3 million:*

- d. Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor, and 2% of the remaining amount if any.

*Replace Section 7.02.B.7.f(1)(e) with City Supplemental Conditions, Projects less than \$3 million:*

- e. Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Section 7.02B 7a. – e.

*Replace Section 7.02.B.7.g(1) with City Supplemental Conditions:*

1. Contractor / Subcontractor markup for self-performed Work for Profit: For Contractor or Subcontractor of any tier for work performed by their forces, 5% of the cost developed in accordance with Section 7.02B 7a.-e.

*Replace Section 7.02.B.7.g(2) with City Supplemental Conditions:*

2. Contractor / Subcontractor markup for Work performed at lower tier for Profit: For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 5% of the subcontract cost developed in accordance with Section 7.02B 7a – h.

*Replace Section 7.02.B.7.h(1) with City Supplemental Conditions:*

1. Contractor's liability insurance: The cost of any changes in Contractor's liability insurance arising directly from execution of the Change Order shall not exceed 1%; and

*Replace Section 7.02.B.7.h(2) with City Supplemental Conditions:*

2. Payment and Performance Bond: The cost of the additional premium for Contractor's bond arising directly from the changed Work shall not exceed 1.5%.

*Add Section 7.02C, 7.02.D with City Supplemental Conditions:*

All mark-ups per Section 7.02.B.7.f

*Add Section 7.02.D with City Supplemental Conditions:*

4. Subcontractor and sub-subcontractor proposals to the Contractor for time and material Work shall include all direct costs plus overhead, profit, taxes, bond, and insurance costs, calculated as provided in Section 7.02B.

### **7.03 CHANGE IN THE CONTRACT TIME**

*Replace Section 7.03.B.2 with City Supplemental Conditions:*

2. Timing and content of Contractor's Notice: Contractor shall not be entitled to an adjustment in the Contract Time for any events that occurred more than 2 Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Time; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Time requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

*Replace Section 7.03.B.3 with City Supplemental Conditions:*

3. Within 14 days of the occurrence of the event giving rise to the request, unless city agrees in writing to allow an additional period of time to ascertain more accurate data, contractor shall supplement the written notice provided in accordance with subparagraph 7.03.B.2 with additional supporting data. such additional data shall include, at a minimum: the amount of delay claimed, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that contractor suffered the delay claimed, but that the delay claimed was actually a result of the act, event, or condition complained of, and that the contract documents provide entitlement to an equitable adjustment in contract time for such act, event, or condition; and supporting documentation sufficiently detailed to permit an informed analysis of the request by City. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent city's interests are prejudiced, constitute a waiver of contractor's right to an equitable adjustment.

*Replace Section 7.03.D.4.a with City Supplemental Conditions:*

- a. Non-productive supervision or labor: cost of Contractor and its crews specifically assigned to the project.  
Home office cost is not allowed.

*Delete section 7.03.D.4.b in its entirety.*

*Replace Section 7.03.D.4.c with City Supplemental Conditions:*

- c. Temporary facilities or equipment rental: cost of temporary facilities or equipment rental extended because of the delay, at invoiced cost, no mark-ups allowed.

*Replace Section 7.03.D.4.d with City Supplemental Conditions:*

- d. Insurance premiums: cost of insurance by invoice extended because of the delay

*Replace Section 7.03.D.e with City Supplemental Conditions:*

- e. Overhead: general and administrative overhead in an amount to be agreed upon, but not to exceed 1% of the Contract Award Amount divided by the originally specified Contract Time for each Day of the delay.

*Add Section 7.03.E with City Supplemental Conditions:*

- E. Notwithstanding any other provision of the Contract Documents, no claim by the Contractor for an equitable adjustment hereunder will be allowed if not asserted within seven (7) days of discovery.

#### **7.04 DELETED OR TERMINATED WORK**

*Add the following new Section 7.04 with City Supplemental Conditions:*

- A. If the Agreement is terminated for convenience in accordance with Section 9.02, or as modified or if any item of Work is deleted in whole or in part, payment will be made for partially completed items mutually agreed or as determined by the City in the proportion that the partially completed Work is to the total item. No claim for damages of any kind or for loss of anticipated profits on deleted or uncompleted work will be allowed because of the termination or deductive Change Order.
- B. If the Agreement is terminated for convenience or parts of the Work are deleted, the Contract Time shall be adjusted as the Parties agree. If the Parties cannot agree, the City shall determine the equitable adjustment for Contract Time.
- C. Acceptable materials ordered by the Contractor or delivered on the Work prior to the date the Work was terminated or deleted by the City, will either be purchased from the Contractor by the City at the actual cost and shall become the property of the City, or the City will reimburse the Contractor for the actual costs connected with returning these materials to the Manufacturers.
- D. If Agreement is terminated prior to the Notice to Proceed, no cost will be incurred by either party.

## **PART 8 CLAIMS AND DISPUTE RESOLUTION**

### **8.01 CLAIMS PROCEDURE**

*Replace Section 8.01.B with City Supplemental Conditions:*

- B. Claim filing deadline for Contractor: Contractor shall file its Claim within 30 days from Owner's final offer made in accordance with paragraph 7.01E, or by the date of Substantial Completion, whichever occurs first.

*Replace Section 8.01.C.6 with City Supplemental Conditions:*

6. Copies of supporting documentation: Copies of any identified documents, inclusive of the Contract Documents, that support the Claim;

*Replace Section 8.01.D.1 and 8.01.D.2 with City Supplemental Conditions:*

1. Response time for Claim less than \$50,000: If the Claim amount is less than \$50,000, with a decision within 30 Days from the date the Claim is received; or
2. Response time for Claims of \$50,000 or more: If the Claim amount is \$50,000 or more, with a decision within 45 Days from the date the Claim is received, or with notice to Contractor of the date by which it will render its decision. City will then respond with a written decision in such additional time.

*Add the following Section 8.01.G with City Supplemental Conditions:*

8. Contractor shall fully investigate its subcontractor's claims and process said claim(s) as Contractor's Claim. Any and all claims which do not meet notification requirements shall be considered null and void.

### **8.02 ARBITRATION**

*Replace Section 8.02.B with City Supplemental Conditions:*

- B. Filing of Notice of arbitration: Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), in the state where project is located, with a copy provided to the City. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of AAA, or mutually acceptable service, before seeking arbitration in accordance with the Construction Industry Arbitration Rules of AAA as follows:

1. Claims for less than \$30,000: Disputes involving \$30,000 or less shall be conducted in accordance with the Northwest Region Expedited Commercial Arbitration Rules; or
2. Claims greater than \$30,000: Disputes over \$30,000 shall be conducted in accordance with the Construction Industry Arbitration Rules of AAA, unless the parties agree to use the expedited rules.

### **8.03 CLAIMS AUDIT**

*Add Section 8.03.B with City Supplemental Conditions:*

25. Schedules

26. Expediting Records and Information

27. Privilege documentation shall be allowed for all Claims of \$500,000 and over.

### **8.04 AUDIT**

*Add the following new Section 8.04.A with City Supplemental Conditions:*

- A. At such times as City deems necessary for reasonable cause, Contractor shall permit the City to inspect and audit all pertinent books and records of the Contractor and its subcontractors or other persons or entities that have performed work in connection with or related to the Contractor's Work under this Agreement. The audit may take place up to three years after Completion. The books and records are to be made available at reasonable times in Pierce County, Washington, or at such other reasonable location as City selects. At City's request, Contractor shall supply City with, or shall permit City to make a copy of, any books and records and any portion thereof. Contractor shall ensure that such inspection, audit and copying right is a condition of any Subcontract, agreement or other arrangement under which any person or entity is permitted to perform work in connection with or related to the Work under this Agreement. Any failure of the Contractor to incorporate contract requirements shall be at the expense of the Contractor.

## **PART 9 TERMINATION OF THE WORK**

### **9.01 TERMINATION BY CITY FOR CAUSE**

*Add the following Articles to Section 9.01 with City Supplemental Conditions:*

- H. If the Contractor defaults, fails, or neglects to carry out the Work in accordance with the Contract Documents, the City may give written notice to cure the problem within seven (7) days. If the problem is not cured or the City determines the effort for correction is inadequate within this time, the City may give a second notice to cure within seven (7) days. If the problem is not cured within this time, the City may issue a notice to terminate for cause, which shall be effective immediately upon issuance.

- I. The City rights to the site are subject to the rights and duties of the surety, if any, that may be obligated under any bond provided in accordance with the Contract Documents.
- J. In a termination situation, the City reserves the right to use any subcontractor, material Manufacturer, fabricator, or any vendor originally contracted by the Contractor or to assign their Contract with the Contractor to the City. The cost of completing the work shall include additional management, design services, legal fees, and other associated costs to complete the project as scheduled.
- K. The Contractor will be terminated for cause if any employee, agent, or representative of the Contractor gives, or offers to give, any gratuity such as a gift or entertainment to an official, employee, officer, or agent of the City.

## **9.02 TERMINATION BY CITY FOR CONVENIENCE**

*Add Section 9.02.C with City Supplemental Conditions:*

- C. This Contract may be terminated by the City upon fourteen (14) days written notice to the Contractor in the event the City determines it is in the best interest of the City to terminate this project. If such termination occurs, cost incurred by the Contractor for any bid/proposal preparation prior to award of contract is the sole responsibility of the Contractor. The City shall only pay the Contractor for work completed and materials or equipment delivered after Notice to Proceed as previously approved by the City.

## **PART 10 MISCELLANEOUS PROVISIONS**

No provisions were made by the City of Tacoma.

**END OF SUPPLEMENTAL CONDITIONS**

## **P A R T I V**

### **TECHNICAL PROVISIONS**

## **TECHNICAL PROVISIONS**

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### **TABLE OF CONTENTS**

#### **DIVISION 01 – GENERAL REQUIREMENTS**

01 11 00	Summary of Work
01 14 00	Work Restrictions
01 29 40	Applications for Payment
01 31 00	Project Management and Coordination
01 32 20	Web Based Construction Document Management
01 33 00	Submittal Procedures
01 35 00	Health and Safety Requirements
01 41 00	Regulatory Requirements
01 41 43	Summary of Pay Items and Quantities
01 45 00	Construction Quality Control
01 51 00	Temporary Utilities
01 52 00	Construction Facilities
01 74 00	Cleaning and Waste Management
01 77 00	Closeout Procedures
01 78 39	Project Record Documents

#### **DIVISION 02 – EXISTING CONDITIONS**

02 41 00	Demolition
----------	------------

#### **DIVISION 31 – EARTHWORK**

31 05 13	Earthwork for Landfill Cap Repair
31 05 19.13	Geotextiles
31 05 19.16	Geomembranes
31 05 19.29	Geonets

#### **APPENDICES**

Appendix A	Plan Set
Appendix B	Construction Quality Assurance Manual – Landfill Gas Flare Station Pad Cap Repairs

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 11 00 – SUMMARY OF WORK**

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**SECTION 01 11 00 – SUMMARY OF WORK**  
**PART 1 – GENERAL**

**1.01 THE PROJECT**

- A. Project Title: SOLID WASTE MANAGEMENT LANDFILL GAS FLARE STATION CAP REPAIR, TACOMA, WASHINGTON
- B. The Project:
- The Project is being implemented by the City of Tacoma (City) to perform landfill cap repairs to the Landfill Gas Flare Station equipment pad. The project includes demolition of an existing adjacent concrete pad and installation of landfill cap in place where the concrete pad is removed.
- C. Project Location: The Landfill Gas Flare Station is located at the City of Tacoma Solid Waste Management Recovery and Transfer Center, 3510 South Mullen Street, Tacoma WA.
- D. Any prospective Bidder desiring an explanation or interpretation of the Bid Documents shall request the explanation or interpretation in writing by close of business 6 business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

**1.02 SUMMARY OF WORK INCLUDED IN THE CONTRACT**

- A. The following summary of work is presented for the convenience of the Contractor and is not intended to be comprehensive or indicate the Contractor's sequence of activity unless otherwise specified elsewhere in the Contract Documents. The Contractor shall be responsible for completing all work elements described in the Contract Documents. The Contract Drawings are included as Appendix A.
- B. The Work includes, but is not limited to, the following:
1. Preparing Project submittals and implementation of Project health and safety related Work.
  2. Site preparation and installation of Best Management Practices for Temporary Erosion and Sediment Control as shown on the Plans included in Appendix A.
  3. Excavating around the equipment pads as shown on Contract Drawings and stockpiling excavated material in the City approved stockpile location.
  4. Demolition of the West Concrete Pad.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 11 00 – SUMMARY OF WORK**

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5. Installation of geotextile, geomembrane and geonet materials (i.e. geosynthetics) in accordance with these specifications and as shown on the plans.
6. Restoring areas disturbed due to construction to pre-construction conditions or better, unless otherwise specified in the Contract Documents.
7. Performing final site cleanup including removal of temporary site controls and garbage (if any) from the site.

**1.03 EXISTING CONDITIONS**

- A. The existing conditions shown on the Contract Drawings are based on an aerial photo from the City of Tacoma's 2015 Orthographic Survey.
- B. Utilities:
  1. The City of Tacoma Information and data on the underground and aboveground utilities shown or indicated in the Drawings are based on the available property information.
  2. The City will not be responsible for the accuracy or completeness of any such information or data relating to utilities or facilities and the Contractor is required to verify all utilities and utility locations prior to work. This Work is located on private property. The Contractor will need to perform the utility locates for conductible and non-conductible using a private utility locate company, as needed and required, to perform the Work.
  3. The cost of all of the following will be included in the Contract price and the Contractor shall have full responsibility for:
    - a. Reviewing and checking all information and data regarding existing conditions.
    - b. Locating all existing utilities and facilities.
    - c. Coordination of the Work with the owners of existing utilities and facilities during construction.
    - d. The safety and protection of all existing utilities and facilities and repairing any damages resulting from the Work.
- C. Environmental Conditions:

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 11 00 – SUMMARY OF WORK**

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1. The Project site is located at the Solid Waste Management Recovery and Transfer Center (RTC). The RTC currently operates as a transfer center for off-site disposal of municipal solid waste, organic materials, recycling and other waste products. The site was previously a sanitary landfill. In 1983, the landfill was placed on the National Priorities List by the U.S. Environmental Protection Agency due to soil and groundwater contamination. The facility currently operates the RTC under a permit with the Tacoma Pierce County Health Department. The final remedy is complete and the landfill closed in November 2013. Environmental controls such as the landfill cap, condensate collection system, central area leachate collection system and the landfill gas collection are required as part of the final remedy to continue to protect human health and the environment. Refer to Appendix B for additional information regarding Construction Quality Assurance Manual for this project as it is required these systems remain in tact during construction with the exception of the work performed to make this repair to the landfill cap.

**1.04 TIME FOR COMPLETION**

- A. The Contractor shall generally work normal business hours Monday through Friday as described in Section 01 14 00, *Work Restrictions* unless approved by the City in writing. Work on weekends and outside of normal business hours is not anticipated for this project.
- B. Substantial Completion: The Project shall be substantially completed in 60 calendar days from Notice to Proceed. See Section 01 77 00 – Closeout Procedures for requirements for Substantial Completion.
- C. Final Completion: The Contractor shall achieve Final Completion 60 calendar days after the date of Substantial Completion. See Section 01 77 00 – Closeout Procedures for requirements for Final Completion.

**1.05 ENVIRONMENTAL DOCUMENTATION OF SUBSTANTIVE COMPLIANCE, LICENSES AND FEES**

- A. The City will notify the US Environmental Protection Agency (EPA) prior to commencing construction.
- B. The Contractor shall obtain and pay fees for project construction-related permits (if a need is determined), licenses, inspections, discharges, and approvals required by laws, ordinances, and rules of appropriate governing or approving agencies necessary for proper completion of Work described in the Contract Documents. The City

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 11 00 – SUMMARY OF WORK**

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shall either reimburse the Contractor for the fees paid or pay the fees directly.

- C. The Contractor shall be responsible for obtaining any permits and paying any fees necessary for Contractor's use of public streets or roads.
- D. Licenses: Contractor shall obtain all licenses associated with construction activities, such as business licenses, contractors' licenses and vehicle and equipment licenses. All costs for licenses shall be included in the Contract Sum.
- E. Test and Inspection Fees: Contractor shall pay all fees charged by authorities having jurisdiction and from serving utility companies and agencies, for tests and inspections conducted by those authorities, companies and agencies (if applicable). The City shall reimburse Contractor for actual amount of such fees, without mark-up.

**1.06 SUBMITTALS**

- A. For the City's records, submit copies of permits, licenses, certifications, inspection reports, receipts for fee payments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work. Maintain copies at Project Site.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 00 – WORK RESTRICTIONS**

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**SECTION 01 14 00 – WORK RESTRICTIONS**  
**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. This section includes requirements and restrictions related to the Work activities performed at the Project Site, including use of premises, access corridors, parking, work hours and protection of existing utilities. Other restrictions imposed by federal, state and local substantive requirements shall also apply.

**1.02 WORK HOURS AND RESTRICTIONS**

- A. All work activities will generally be performed during Normal Work Hours from 7:00a.m. to 7:00 p.m., Monday through Friday, excluding weekends and holidays, or as otherwise approved in advance by the City. The Contractor shall provide a notice to the City to obtain approval for weekends and holidays work as described below. All costs for working weekends and holidays, as necessary, shall be included in the contract price.
- B. Normal Work Hours are subject to availability of adequate daylight to safely perform the Work.
- C. Work hours and noise control established by any ordinance, law, or regulations will supersede the requirements of this Section.
- D. Contractor may conduct regular equipment maintenance (e.g., inspection, adjustments, lubrication) and minor repairs during hours outside of the Normal Work Hours defined in this Section.
- E. Any variation from Normal Work Hours or work holidays will be subject to approval by the City; such approval will not be unreasonably withheld. Contractor shall submit notice to the City no less than 3 days and confirm 24 hours prior to requesting any necessary variation from Normal Work Hours, to allow for adequate review and coordination of staff. Contractor shall provide written notice to the City which shall include Work activities to be conducted outside of Normal Work Hours and the hours and days that those activities will be conducted.
- F. Emergency repairs of equipment outside of Normal Work Hours may be performed without the 7-day notice, but the Contractor shall verbally notify the City prior to such emergency maintenance and shall follow-up with a written notice to document the reason for the change.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 00 – WORK RESTRICTIONS**

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**1.03 CONTRACTOR’S USE OF PROJECT SITE**

- A. Contractor shall confine all operations, including the storage of materials, to the designated Work areas of the Project Site as shown in the Contract Drawings, or as otherwise approved in writing by the City.
- B. Contractor shall be responsible for arranging for, and paying the costs of any necessary off-site storage.
- C. Contractor’s use of the premises shall be limited to the Work being performed in accordance with the Contract Documents.
- D. Contractor shall be responsible for the security and safety of Contractor’s equipment, facilities, and Work areas. The City shall not be liable for loss or damage of Contractor’s tools, vehicles, equipment, or materials, whatever the cause.
- E. Contractor shall be responsible for any damage to roadways, facilities, utilities, trees or structures on or adjacent to the Site due to negligence, carelessness, actions, errors or omissions on the part of the Contractor.

**1.04 ACCESS CORRIDORS**

- A. Contractor vehicles shall enter and exit the Work areas only at the locations designated in the Drawings or as otherwise approved in writing by the City.
- B. The access to the Site is off Orchard Street at South 34<sup>th</sup> Street. This is considered the secondary access to the site for City of Tacoma employees and for business use during normal working hours.
- C. Contractor’s operations shall not impede operations at Solid Waste Management’s Recovery and Transfer Center.

**1.05 PARKING**

- A. Contractor shall park vehicles and construction equipment only in contractor work area(s) or other areas approved by the City for such purposes. A written request at least 48 hours in advance must be submitted to the City for any areas outside the designated work area.
- B. Vehicles shall not be parked in any locations where they impede traffic at the site for RTC operations or access to areas where Work is being conducted.
- C. The Contractor will be required to maintain access to the Gas Flare Station for required City required equipment inspection and repair (if needed) throughout the duration of the construction.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 00 – WORK RESTRICTIONS**

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**1.06 PROTECTION OF EXISTING UTILITIES**

- A. Contractor shall be responsible for locating all utilities prior to any earth disturbing activities. It is not anticipated that utilities reside in the area of work but this cannot be guaranteed. This Work is located on private property. The Contractor will need to perform the utility locates for conductible and non-conductible using a private utility locate company, as needed and required, to perform the Work. Locate all utilities (underground and aboveground) on the Site prior to beginning the Work. Currently known utilities are shown on Contract Drawings.
- B. Comply with the requirements of the City of Tacoma and the State of Washington regulations for protection of underground utilities and overhead utilities.
- C. All utilities shall be protected from damage during construction, unless otherwise indicated to be removed or abandoned. If damaged, the utilities shall be repaired as required by the City at the Contractor's expense.
- D. If a utility is encountered which is not shown in the Drawings or otherwise made known to the Contractor prior to beginning the Work, promptly take necessary steps to assure that the utility is not damaged, and give written notice to the City. The City will then review the conditions and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence of the utility.

**1.07 THE CITY'S USE OF PROJECT SITE**

- E. The Contractor shall provide the City and their representatives, regulatory agency representatives and others, as designated by the City, access to the Work in progress.
  - 1. The City and their representatives shall be authorized to enter the Project Site to observe and document the Work activities and coordinate communications and activities.
  - 2. The number of the City and regulatory agency personnel shall be determined at the City's discretion depending on the type and sensitivity of the Work being performed.
- F. Contractor shall provide the City all reasonable access to the Work to photograph, document, measure, sample, or other activities as required by the City.

**PART 2 – PRODUCTS (NOT USED)**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 00 – WORK RESTRICTIONS**

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**PART 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**

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**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**  
**PART 1 - GENERAL**

**1.01 SUMMARY**

A. Section includes:

1. Schedule of Values.
2. Procedures for preparation and submittal of Applications for Payment.

**1.02 FORMAT**

- A. Develop satisfactory spreadsheet-type form generated from the Progress Schedule.
- B. When Change Orders are executed, add Change Orders at end of listing of scheduled activities:
  1. Identify change order by number and description.
  2. Provide cost of change order in appropriate column.
- C. After completing, submit Application for Payment.
- D. City will review application for accuracy.
- E. Execute application with signature of responsible officer of Contractor.

**1.03 SUBSTANTIATING DATA**

- A. Provide Substantiating Data with cover letter identifying:
  1. City's specification number and project number.
  2. Project name and location.
  3. Contractor's name and address.
  4. Application number and date of submittal.
  5. Detailed list of enclosures.
  6. For stored products with item number and identification on application, description of specific material, and proof of insurance coverage for offsite stored products.
  7. Submit certified payroll.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**

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**1.04 SUBMITTALS**

- A. Application for Payment and Substantiating Data with cover letter: Submit one (1) hard copy.
- B. Prepare progress payment requests monthly. Base requests on the breakdowns of costs for each scheduled activity and the percentage of completion for each activity.

**1.05 SCHEDULE OF VALUES**

- A. Submit for City review and acceptance, in conjunction with the Baseline Schedule, a Schedule of Values per Documents 00 72 00 and 00 73 00 identifying costs of all construction activities as generated by the schedule. Equate the aggregate of these costs to the Contract Sum.
- B. Submit corrected schedule of values within 5 calendar days upon receipt of reviewed Schedule of Values.
- C. Provide certified payroll statements with application for payment.
- D. Additional breakdown requirements:
  - 1. For items on which progress payments will be requested for materials or equipment purchased/fabricated/delivered but not yet installed, show "initial value" for payment request and "value added" for subsequent stage(s) of completion on that unit of Work. Identify materials stored on- site or off-site.
  - 2. For each line item of installed value exceeding 10 percent of the Contract Sum, show breakdown by major products or plant operations under each item for ease of review and confirmation of Work completed. Identify material and labor as separate items.
  - 3. Identify each administrative and procedural requirement as a separate line item:
    - a. Mobilization.
    - b. Administration Costs.
    - c. Construction schedule.
    - d. Bonds and insurance.
    - e. Demolition and repair.
    - f. Cleanup.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**

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- g. Record Documents.
  - h. Special warranties.
  - i. Temporary facilities.
- 4. The minimum value shall be no less than 2-percent of the Contract Sum for each requirement listed:
  - a. Cleanup.
  - b. Record Documents.
- 5. Round figures to nearest dollar amount.
- 6. Coordinate items of the Schedule of Values so that there is a corresponding item in the Construction Progress Schedule. If activities are added or removed from the Progress Schedule, revise the Schedule of Values and resubmit.

**1.06 PAYMENT APPLICATION**

**A. General:**

- 1. Submit itemized payment request as required in Documents 00 72 00 and 00 73 00 together with Schedule of Values and other submittals as listed herein or elsewhere in the Contract Document.
- 2. Except as otherwise indicated, sequence of progress payments is to be regular, and each must be consistent with previous applications and payments; it is recognized that certain applications involve extra requirements, including initial application, application at times of Substantial Completion, and final payment application.
- 3. By submitting an Application for Payment, Contractor is certifying that to the best of Contractor's knowledge, information, and belief, the work covered by each Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by him for work for which previous Applications for Payment were issued and payments received from the City, and that current payment is now due.
- 4. Contractor certifying Subcontractor payment: In accordance with Documents 00 72 00 and 00 73 00.

**B. Submit progress payment requests at progress meetings.**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**

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- C. Each Application for Payment shall be consistent with previous applications and payments as certified and paid for by City:
  - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements as set forth in other Division 01 Sections.
- D. Payment Application Times: The City at the pre-construction meeting will establish the date for each progress payment and the period of construction Work covered by each Application for Payment.
- E. Payment Application Forms: In accordance with Documents 00 72 00 and 00 73 00, use American Institute of Architects (AIA) Documents G702 & G703.

Provide with continuation sheets for the schedule of values, and place the following paragraphs at the end for signatures:

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Document, that all amounts have been paid by the contractor to employees, subcontractors, suppliers, etc. for Work for which previous Certificates for Payment were issued and payments received from the City, and that current payments shown herein is now due. (Contracting Firm)

By \_\_\_\_\_ Date \_\_\_\_\_  
(SIGN IN INK)

- F. Application Preparation: Complete every entry on form. Notarize and execute by an Officer of the Company authorized to sign legal documents on behalf of Contractor. City will return incomplete applications without action:
  - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  - 2. Include amounts of Change Orders issued before last day of construction period covered by application.
- G. Transmittal: Electronic signed and notarized each Application for Payment to City by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments, if required:
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**

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- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Statement of Intent to pay prevailing wages.
  3. Schedule of Values.
  4. Contractor's Construction Schedule (preliminary if not final).
  5. Products list.
  6. Submittals Schedule (preliminary if not final).
  7. List of Contractor's staff assignments.
  8. List of Contractor's principal suppliers and subcontractors.
  9. Copies of permits, if any.
  10. Copies of authorizations and licenses from City for performance of the Work, if any.
  11. Initial progress report.
  12. Report of preconstruction conference.
  13. Certificates of insurance and insurance policies.
  14. Performance and payment bonds.
  15. Data needed to acquire City's insurance.
  16. Other documents as may be required in the Contract Documents.
- I. Applications each Month During Construction: Submit itemized application, electronically, each with Contractor's notarized affidavit and signed receipts from Principal Subcontractors and Suppliers as specified below. Also include with each application:
1. Updated construction schedule in accordance with Section 01 31 00 – Project Management and Coordination.
- J. Construction Schedule Update: Submit with applications for payment a revised updated project CPM schedule for evaluation and measurement of actual work-in-place with said applications for payment:
1. Application for Payment at Substantial Completion: In accordance with Documents 00 72 00 and 00 73 00.
  2. Final Payment Application: In accordance with Documents 00 72 00 and 00 73 00.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**

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- K. Progress Report: Submit with applications for a payment a report summarizing the work completed during the pay period.
- L. On-going documentation verifications prior to payment: City will verify the following documentation prior to payment. Failure to provide current documentation to City's satisfaction shall be considered grounds for withholding progress payment and/or final payment to the Contractor in accordance with Documents 00 72 00 and 00 73 00:
  - 1. Current Record Documents: With each Progress Meeting, Contractor is required to present for review to the City, a current set of Record Documents in accordance with Section 01 77 00 - Closeout Procedures.
- M. Notarization and Signed Receipts: Contractor's Affidavit:
  - 1. After the first request for payment, all copies of each subsequent request shall be accompanied by Contractor's notarized original signature with the statement that all subcontractors and suppliers have been paid to date as their interests appeared in the last payment received (less earned retainage applicable to subcontractors). And shall also be accompanied by a signed receipt from the Principal Subcontractors and Suppliers stating that all sub-subcontractors, suppliers, wages, fringes, and taxes arising out of such subcontract have been paid in full as their interest appeared in the last payment received. Any amounts withheld from any subcontractor's or supplier's payment due to lack of performance, or other reason, shall be fully documented with the statement, indicating the amount and justification of payment(s) withheld.
  - 2. No application for payment by the Contractor shall be processed unless accompanied by both the affidavit and the receipts.

**1.07 PAYMENT FOR STORED MATERIAL**

- A. Payment for stored items will be subject to the following:
  - 1. On-Site Materials: Progress payments shall be made for permanent materials and equipment to be incorporated in the Work and properly protected and stored on the project site with invoices from the original supplier provided to substantiate the value.
  - 2. Off-Site Materials: No payment will be made for materials stored off site, unless otherwise allowed in the General or Supplementary Conditions.
- B. Stored materials items may be included in monthly application for payment only after drawing and data submittals, if any are required, have been

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 29 40 – APPLICATIONS FOR PAYMENT**

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completed per Contract Documents. A maximum of 90 percent will be paid for materials stored.

- C. Partial payment for materials and equipment in advance of installation shall not constitute acceptance thereof and will not relieve Contractor of full responsibility for condition and subsequent acceptance by the City. Faulty materials discovered will be rejected even though partial payment may have been made.

**1.08 FORCE ACCOUNT**

- A. The City will indicate to the Contractor when Work is to be performed under Force Account:
  - 1. Force account work administered by the Contractor shall be consistent with the requirements of the Contract Documents.
  - 2. Prior to performing Force Account Work, the Contractor shall submit an equipment list containing equipment type, horsepower, attachments, etc.
- B. Payment for Force Account Work shall be agreed to in writing by the City and Contractor prior to performance of the Force Account Work.

**1.09 OVERTIME**

- A. Overtime, double shifts and longer than normal shifts will not be considered reason or justification for extra compensation, unless specifically approved in advance and in writing by the City.

**1.10 SUBSTANTIATING DATA**

- A. When City requires substantiating information, submit data in a timely manner justifying line item amounts in question.

**1.11 CONSENT OF SURETY**

- A. Prior to Final Acceptance, Contractor shall submit Consent of Surety from Contractor's Bonding Agency.

**PART 2 – PRODUCTS – (NOT USED)**

**PART 3 – EXECUTION – (NOT USED)**

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**  
**PART 1 – GENERAL**

**1.01 PROJECT SUPERVISION**

**A. Contractor's Supervision**

1. The Contractor shall provide the services of a full-time, experienced construction field superintendent who shall be assigned to the job during the Work.
  - a. Construction field superintendent shall be experienced in placement of landfill cap materials and working our environmental control system such as is identified in the Contract Documents.
  - b. The person designated as construction field superintendent shall have direct charge of the work and shall be authorized to accept and execute all orders and directions issued by the City.
  - c. The construction field superintendent shall be readily available during normal work hours for consultation with the City and be physically on the Project Site during Site activities.
  - d. The construction field superintendent shall not be removed or replaced during the entire course of the contract work without the written approval of the City.
2. The Contractor shall manage the Project. The Contractor shall inform the City with information throughout the work so that they can make informed and effective decisions.
3. Unprofessional behavior of any kind by contractor and subcontractor personnel is unacceptable and will not be tolerated on this Project.
  - a. The City will direct the Contractor to immediately remove any contractor or subcontractor personnel from the Project, for the duration of the Project, that exhibit unprofessional behavior to the City and their representatives, regulatory agency personnel or general public, and replace with competent personnel that are acceptable to the City.
  - b. Upon notification by the City, the Contractor's failure to immediately address and correct any displays of

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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unprofessional behavior by its personnel or by subcontractor personnel, or to remove personnel exhibiting such behavior when directed to do so by the City is grounds for termination of the contract for cause.

**B. The City's Supervision**

1. The City's Project/Construction Manager or the Engineer, or their designee will represent the City on the Project Site.
2. City's Construction Manager will be responsible for communications with the Contractor and City's field inspector will provide construction oversight.

**1.02 MEETINGS**

The Contractor's Project Manager and/or Project Superintendent shall attend, at a minimum, the following meetings with the City and/or the Engineer:

**A. Pre-construction Meeting**

1. Following the award, the City will notify the selected bidder of the time and date of a preconstruction meeting. The pre-construction meeting will be conducted in Tacoma and may include a site visit to Project Site. The following is the requested attendee list and suggested agenda:
  - a. The City:
    - 1) The City Construction Manager
    - 2) The City Project Manager
    - 3) The City's Engineer
    - 4) The City's Inspection Team
  - b. The Contractor:
    - 1) Project Manager
    - 2) Superintendent
    - 3) Contract Administrator (if required)
    - 4) Major Subcontractors (as required)
    - 5) Major Suppliers (as required)

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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- c. Other representatives as determined by the City.
- d. Final agenda for pre-construction meeting will be developed at later date (prior to the meeting). The following presents the suggested Agenda:
  - 1) Communications and routing
  - 2) Execution of the Contract
  - 3) Discussion of the General Conditions
  - 4) Discussion of the Special Conditions
  - 5) Change Order Process
  - 6) Terms and Conditions of Payment
  - 7) Discussion of the Project Elements
  - 8) Use of the Project Site (work and staging areas)
  - 9) Temporary facilities and controls (security, TESC, and environmental)
  - 10) Work Restrictions
  - 11) Pre-Construction Submittals
  - 12) Contractor's Construction Schedule
  - 13) Topics requested by the City, Contractor, or the Engineer
  - 14) Site visit
  - 15) Other issues, if any

**B. Weekly Progress Meetings**

- 1. The City will schedule Weekly Progress Meetings throughout the progress of the Work. The Contractor will prepare meeting agenda, preside at the meetings, record meeting notes, and distribute agenda and notes to meeting participants and other affected by decisions made.
- 2. The Contractor shall provide weekly Progress Meeting Documents prior to each progress meeting in accordance with the submittal

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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timing requirements identified in Section 01 33 00 – Submittal Procedures.

3. Attendance is required for the Contractor's Project Superintendent, major subcontractors (as needed) and suppliers (as needed), the City project personnel, the Engineer, and others as appropriate for the agenda topics for each meeting.
4. The Standard Agenda shall include the following:
  - a. Review of previous progress meeting notes and correct as necessary.
  - b. Review site safety and health issues identified since the last meeting by the Contractor, the City, the Engineer, and the public.
  - c. Regulatory compliance, temporary controls (security, TESC and environmental) or related issues.
  - d. Review status of the Work and progress since the last meeting.
  - e. Review Contractor's Updated Project Schedule, 3 week look ahead.
  - f. Review items of significance that could affect progress of the Work.
  - g. Determination whether each activity is on schedule, ahead of schedule, or behind schedule in relation to the Contractor's Construction Progress Schedule.
  - h. Determine how Work behind schedule will be expedited and secure commitments from parties involved to do so.
  - i. Discuss schedule revisions to ensure that current and subsequent Work activities will be completed within the Contract Time.
  - j. Review of Contractor's Redline Drawings (bi-weekly).
  - k. Review status of Submittals, Substitutions, Requests for Information (RFIs), Change Orders/Directives, Schedule Modification Requests, Project Record, Pay Request and other documents under preparation or review by either Contractor or the City.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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**C. Special Meetings**

Special meetings may be held at the City's request when a problem or deficiency is present or likely to occur. The purpose of these meetings will be to define and discuss a problem or recurring work deficiency, review alternative solutions, and identify a plan to resolve the problem or deficiency efficiently and effectively.

1. Contractor's Project Manager and/or Project Superintendent shall attend special meetings.
2. Contractor's Project Manager and/or Project Superintendent shall attend other meetings at the City's request to coordinate Contractor's activities with related work being conducted by the City.

**D. Health and Safety Meetings**

1. Contractor shall conduct health and safety meetings for Contractor personnel as required by Contractor's health and safety plan, including but not limited to daily tailgate safety meetings. The City and/or Engineer may attend Contractor's health and safety meetings, as needed, to be aware of work conditions or health and safety concerns that could affect the City or the Engineer or the coordination or execution of the Work.

**1.03 NOTIFICATION POINTS**

- A. The Contractor shall notify the City at all milestone points prior to proceeding further to allow inspection of the Contractor's Work progress. The City or the Engineer may request additional Notification points. Milestone points include, but are not limited to, the following:

1. Prior to performing work.
2. Following installation Best Management Practices and temporary environmental controls.
3. Prior to and following the placement of each material to the requirements of design.
4. Prior to and following the restoration of areas disturbed due to construction.
5. Prior to removing site security controls and temporary environmental controls.
6. Following final site cleanup activities.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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**1.04 SUBMITTALS**

- A. Project Schedule: The Contractor shall submit a Preliminary Project Schedule in accordance with the submittal timing requirements identified in Section 01 33 00 – Submittal Procedures. The schedule shall include all critical path items. The schedule shall be used to evaluate progress of work based on the Pay Items. The schedule shall show the Contractor's planned order and interdependence of activities, and sequence of work. The schedule shall be updated weekly or as often as requested by the City. The Project Schedule shall display the following information, at a minimum:
1. Date of Notice to Proceed.
  2. Durations, starts and finishes of installation of temporary construction facilities and environmental controls, site preparation clearing and grubbing activities and all other support activities necessary for material placement Work.
  3. Durations, starts and finishes of material placement activities.
  4. Interrelationships and dependence of activities.
  5. Planned vs. actual status for each activity.
  6. Preliminary punch list.
  7. Substantial completion.
  8. Punch list.
  9. Final inspection.
  10. Final completion; and
  11. Float time.
- B. Progress Meeting Documents. The Contractor shall prepare and update the Progress Meeting Documents on a weekly basis and bring the required number of copies to the Weekly Progress Meeting in addition to submitting these in accordance with the submittal timing requirements identified in Section 01 33 00 – Submittal Procedures. At a minimum, Progress Meeting Documents shall include the following:
1. Updated Project Schedule:
    - The actual duration and sequence of as-constructed Work activities, including changed Work.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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- Approved time extensions.
- Unresolved requests for time extensions shall be reflected in the Schedule Update by assuming no time extension will be granted, and by showing the effects to follow-on activities necessary to physically complete the project by substantial completion.
- Any construction delays or other conditions that affect the progress of the Work.
- Any modifications to the as-planned sequence or duration of remaining activities.
- Any modifications to the Critical Path.
- The completion of all remaining Work in the remaining Contract time.

2. 3-Week Look Ahead:

- A schedule that focuses on activities that are planned to be completed in upcoming 3 weeks with a look back 1 week.

C. Project Management and Coordination Plan: Submit Project Management and Coordination Plan in accordance with the submittal timing requirements identified in Section 01 33 00 – Submittal Procedures. The plan shall identify following:

1. Resume of Project Superintendent(s).
2. Identification of key personnel and their contact information. Contractor shall also identify their organization's administrator on the list.
3. List of major sub-contractors and their key personnel's contact information.
4. List of major Equipment, Systems, and Materials.
5. List of permits and approvals to be obtained by Contractor.

**1.05 CONSTRUCTION SCHEDULE REGARDING SUBMITTALS**

- A. The Contractor is hereby notified that the City will not defer liquidated damages or waive specified requirements due to project delays resulting from Contractor actions or inaction (including Contractor insufficient planning) or other causes, including but not limited to:

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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1. Contractor's late or inadequately packaged submittals, or submittals that require more than two City reviews before approval by the City.

**1.06 DIRECTION FROM CITY OF TACOMA**

- A. All direction regarding the Project shall be obtained from the City.

**PART 2 – PRODUCTS – (NOT USED)**

**PART 3 – EXECUTION – (NOT USED)**

**END OF SECTION**

## **DIVISION 01 – GENERAL REQUIREMENTS**

### **SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT**

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#### **SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT PART 1 – GENERAL**

##### **1.01 DESCRIPTION OF WORK**

- A. This Section specifies requirements for web-based construction document management.

##### **1.02 REQUIREMENTS**

- A. The City, Engineer, and Contractor shall utilize e-Builder® ASP software (e-Builder) and protocols as the primary means for submission and tracking of data and documents (unless specified otherwise in this Section) throughout the duration of the Contract. Certain documents (such as those requiring original signatures, product samples and large format documents) will require hard-copy submittal instead. This specification section describes document submittal procedures and requirements for e-Builder submittal requirements only. Refer to Section 01 33 0 - Submittal Procedures which describes general submittal procedures and submittal content requirements:
  - 1. e-Builder is a web-based electronic media site hosted by e-Builder, Inc.
  - 2. e-Builder is paid for by the City. Access to the web site will be by individuals who are licensed users.
  - 3. Access to the e-Builder project will be made available by the City for up to a total of four (4) licensed user accounts for Contractor's personnel at no cost. The joint use of this system is to facilitate electronic exchange of information, automation of key processes, and overall management of Contract Documentation.
  - 4. The joint use of this system is to facilitate electronic exchange of information, automation of key processes, and overall management of Contract Documentation.
  - 5. e-Builder shall be the primary means of project information submission and management.
- B. User Access Limitations:
  - 1. The City will control the Contractor's access to e-Builder by allowing access and assigning user profiles to accepted Contractor personnel. User profiles will define levels of access into the system; determine assigned function-based authorizations and user privileges. The Contractor may choose to provide subcontractors and suppliers access to e-Builder through the Contractor's accounts. Entry of information exchanged and transferred between the Contractor and its

## **DIVISION 01 – GENERAL REQUIREMENTS**

### **SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT**

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subcontractors and suppliers on e-Builder shall be the responsibility of the Contractor.

2. Only entities with a direct contract with the City will be allowed to be an authorized user. The City reserves the right to perform a security check on all potential users.

#### **C. Joint Ownership of Data:**

1. Data entered in a collaborative mode (entered with the intent to share as determined by permissions and workflows within the e-Builder system) by the City, Engineer, and the Contractor will be jointly owned. The use of CAD files, processes or design information distributed in this system is intended only for the project specified herein. **DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!**
2. The City may, at the City's discretion, provide electronic copies of CAD Drawings of the Contract Drawings for Contractor's use in preparing submittal drawings. The Contractor must complete and submit the indemnification form for City approval before electronic files will be released. Contractor shall be responsible for distributing copies of CAD drawings to subcontractors for use in submittal drawings. Contractor shall not release any drawings to subcontractors without first receiving and forwarding a copy of the completed release and indemnification paperwork signed by the subcontractor to the City. Release form will be provided upon request by Contractor to use City issued CAD drawings. City makes no representations as to the accuracy or completeness of CAD Drawings as they relate to the Contract Drawings.

#### **D. Automated System Notification and Audit Log Tracking:**

1. Review comments made (or lack thereof) by the City on Contractor submitted documentation shall not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor is responsible for managing, tracking, and documenting the Work to comply with the requirements of the Contract Documents. City's acceptance via automated system notifications or audit logs extends only to the face value of the submitted documentation and does not constitute validation of the Contractor's submitted information.

#### **E. Computer Requirements:**

1. The Contractor shall use computer hardware and software that meets the requirements of the e-Builder system as recommended by e-Builder, Inc. to access and utilize e-Builder. As recommendations are

**DIVISION 01 – GENERAL REQUIREMENTS****SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT**

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modified by e- Builder, the Contractor will upgrade their system(s) to meet or exceed the recommendations. Upgrading of the Contractor's computer systems will not be justification for a cost or time modification to the Contract.

2. The Contractor shall ensure that connectivity to the e-Builder system is accomplished through DSL, cable, T-1 or wireless communications systems. The City will not be liable for any delays associated from the usage of e-Builder including, but not limited to slow response time, down time periods, connectivity problems, or loss of information. The Contractor will ensure that connectivity to the e-Builder system meets the minimum requirements described in this Section. Under no circumstances shall the usage of the e-Builder be grounds for a time extension or cost adjustment to the contract.
3. The e-Builder mobile application is available on the iOS and Android platforms only.

F. Contractor Responsibility:

1. The Contractor shall be responsible for the validity of their information placed in e-Builder and for the abilities of their personnel.
2. Accepted users shall be knowledgeable in the use of computers, including Internet Browsers, email programs, CAD drawing applications, Microsoft Office Suite, and Adobe Portable Document Format (PDF) document distribution program.
3. The Contractor shall utilize the existing forms in e-Builder to the maximum extent possible. If a form does not exist in e-Builder the Contractor must include a form of their own or provided by the Engineer as an attachment to a submittal. City may create an e-Builder form based on Contractor request.
4. Adobe PDF documents will be created through electronic conversion rather than optically scanned whenever possible. The Contractor is responsible for the training of their personnel in the use of e-Builder (outside what is provided by the City) and the other programs indicated above as needed. e-Builder may be contacted directly to provide training as needed at proposer's cost.

G. Documents that shall be transmitted and otherwise processed utilizing the e- Builder system shall include, but not be limited to the following:

1. Construction Correspondence
2. Submittals

**DIVISION 01 – GENERAL REQUIREMENTS****SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT**

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3. Requests for Information and responses
4. Change Order Requests
5. Meeting Minutes and Agendas

**1.03 SUBMITTALS**

- A. Establish a list of all submittals in accordance with Section 01 33 00 - Submittal Procedures, and identify which submittals are anticipated to be submitted through e-Builder and which submittals in paper form only.

**1.04 TRAINING & SUPPORT**

- A. One group training session scheduled by the City will be provided for the Contractor at an City training facility. The training session duration is generally four (4) hours.
- B. Companies may also obtain group training from e-Builder at their own expense. Contact e-Builder for availability and cost.
- C. e-Builder will provide on-going support through on-line help files and technical support available at [support@e-builder.net](mailto:support@e-builder.net) or 1-888-288-5717.

**PART 2 – PRODUCTS****2.01 DESCRIPTION**

- A. e-Builder project management application (no equal) provided by e-Builder, Inc. at: [www.e-Builder.net](http://www.e-Builder.net).

**PART 3 – EXECUTION****3.01 UTILIZATION**

- A. e-Builder shall be utilized in connection with all document and information management required by these Contract Documents otherwise in the Specifications.
- B. Track and send notifications for all documents requiring City input (such as submittals, RFIs and change orders) using the e-Builder system. In cases requiring hard-copy submittal, also submit the submittal cover (or transmittal cover sheet) sheet simultaneously through e-Builder.

**3.02 RECORD KEEPING**

- A. Except for paper documents which require original signatures or large format documents (greater than 11 x 17 inches) and photographic

**DIVISION 01 – GENERAL REQUIREMENTS****SECTION 01 32 20 – WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT**

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documentation, all documents shall be submitted by transmission solely in electronic form to the e-Builder web site by licensed users, except as noted otherwise:

1. The City and their representatives and the Contractor shall respond to documents received in electronic form through the web site and consider them as if received in paper document form.
2. The City and their representatives and the Contractor reserve the right to and shall reply or respond by transmissions in electronic form on the web site to documents actually received in paper document form.
3. The City and their representatives and the Contractor reserve the right to and shall copy any paper document into electronic form and make same available on the web site.
4. Paper documents with original signature(s) shall be submitted for certain key forms. Once received, reviewed and otherwise completed, the City will scan and upload these signed forms to e-Builder. The following are some but not all the paper documents which require original signature:
  - a. Contract.
  - b. Change Orders.
  - c. Application & Certificates for Payment.

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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**SECTION 01 33 00 – SUBMITTAL PROCEDURES**  
**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. This Section specifies general and procedural requirements for submittals required for performance of the Work.
- B. Insofar as practical, and unless specifically noted otherwise, the Contractor, City and Engineer will utilize the City's web-based construction document management system (e-Builder) to process submittals.
- C. Additional requirements for administrative submittals are provided in other Sections of the Contract Documents. Such submittals include, but are not limited to:
  - 1. Permits.
  - 2. Applications for Payment.
  - 3. Contractor's Construction Progress Schedule and Progress Schedule updates.
  - 4. Guarantees.
  - 5. Representative product samples.
  - 6. Substitutions.
  - 7. Submittals related to each Work element.

**1.02 DEFINITIONS**

- A. Certificates: means document affirmations by the Contractor, subcontractor, or manufacturer entities that the work is in accordance with the Contract Documents.
- B. Manufacturer's instructions: means instructions, stipulations, directions, and recommendations issued in printed form by the manufacturer of a product addressing handling, installation, erection, and application of the product; manufacturer's instructions are not prepared especially for the Work.
- C. Product data: usually consists of manufacturers' printed data sheets or catalog pages illustrating the products to be incorporated into the project. This provides information about building materials, including dimensions, manufacturer, model, quantity, use and performance characteristics, finish, warranty details, and more.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- D. Samples: full-size actual products intended to illustrate the products to be incorporated into the project. These are examples of the physical products that the Contractor will use in construction.
- E. Shop drawings: Shop drawings are prepared specifically for the project to illustrate details, dimensions, and other data necessary for satisfactory fabrication or construction that are not shown in the contract documents. Shop drawings could include graphic line-type drawings, single-line diagrams, or schedules and lists of products and their application.
- F. Submittals: means work plans, site plans, schedules, test results, product data, and others that demonstrate how Contractor intends to conform with the Contract Documents.

**1.03 GENERAL INSTRUCTIONS**

- A. The City, Engineer and Contractor shall utilize e-Builder software (e-Builder is a registered trademark of e-Builder, Inc.) as the primary means for submission of data and documents (unless specified otherwise in this Section) throughout the duration of the Contract. Certain documents (such as those requiring original signatures, product samples and large format documents) will require hard-copy submittal instead. This specification section describes document submittal procedures and requirements for e-Builder submittal requirements only. Refer to Section 01 32 20 - Web Based Construction Document Management which describes general Web-based construction document management procedures.
- B. Provide submittals that are specified or reasonably required for construction, operation, and maintenance of the Work.
- C. Contractor shall not utilize or copy any Contract Documents in part or whole as the primary basis for submittal approval. Each submittal shall clearly demonstrate the Contractor's understanding of the scope required.
- D. Edit all submittals so that the submittal specifically applies to only the equipment or material furnished. Neatly cross out all extraneous text, options, models, etc. that do not apply to the equipment being furnished, so that the information remaining is only applicable to the equipment or material being furnished.
- E. Prepare submittals in the English language. Do not include information in other languages.
- F. Present measurements in customary American units (feet, inches, pounds, etc.). Metric units will not be acceptable.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- G. Show dimensions, construction details, wiring diagrams, controls, manufacturers, catalog numbers, and all other pertinent details.
- H. Where multiple submittals are required, provide a separate submittal for each specification section:
  - 1. To expedite construction, the Contractor may make more than one (1) submittal per specification section, but a single submittal may not cover more than one specification section.
  - 2. The only exception to this requirement is when one specification section covers the requirements for a component of equipment or material specified in another section.
- I. Submittals must be clear and legible, and of sufficient size for presentation of information:
  - 1. Minimum page size shall be 8 1/2 inches by 11 inches.
  - 2. Maximum page size shall be 11 inches by 17 inches.
- J. Submittals in electronic media format:
  - 1. In accordance with Section 01 32 20 - Web Based Construction Document Management.
  - 2. General: Provide all information in PC compatible format using Windows operating system as utilized by the Engineer and City.
  - 3. Text: Provide text documents and manufacturer's literature using Portable Document Format (PDF) as utilized by the City and Engineer.
  - 4. Graphics: Provide all graphic submittals (drawings, diagrams) utilizing Portable Document Format (PDF) as utilized by the Engineer and City.
  - 5. Contractor using other software shall be required to provide to the Engineer conclusive evidence of 100 percent data transfer compatibility.

**1.04 SUBMITTAL CONTENTS**

- A. Submittal Transmittal Form is provided in at the end of this Section:
  - 1. Substitute forms require City approval based on forms providing the same information, statements, and certifications.
  - 2. Required submittal numbering format: Submittal number--resubmittal number:

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- a. Example: 132-1:
    - 1) “132” indicates the submittal number is 132.
    - 2) “1” indicates the first resubmittal of Submittal 132.
  - b. Contractor may add a separate numbering scheme for Contractor’s internal use. However, all correspondence with City must include the required submittal numbering.
3. Specification section: Include with each submittal a copy of the relevant specification section, including relevant addendum updates:
- a. Indicate in the left margin, next to each pertinent paragraph, either compliance with a check (√) or deviation with a consecutive number (1, 2, 3).
  - b. Provide a list of all numbered deviations with a clear explanation and reason for the deviation.
4. Drawings: Include with each submittal a copy of the relevant Drawing, including relevant addendum or change order updates. Areas affected by addendum or change order updates shall be clearly identified using a “bubble” designation and referenced with the addendum or change order number:
- a. Indicate either compliance with a check (√) or deviation with a consecutive number (1, 2, 3).
  - b. Provide a list of all numbered deviations with a clear explanation and reason for the deviation.
  - c. Provide field dimensions and relationship to adjacent or critical features of the Work or materials.
5. Other information or materials as needed.

**1.05 SUBMITTAL FORMAT**

- A. Fully indexed with a tabbed divider for every component.
- B. Sequentially number pages within the tabbed sections:
  1. Submittals that are not fully indexed and tabbed with sequentially numbered pages, or are otherwise unacceptable, will be returned without review.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- C. Organize submittals in the same order as the items are referenced, listed, and/or organized in the specification section.
- D. For submittals that cover multiple devices used in different areas under the same specification section, the submittal for the individual devices must list the area where the device is used.
- E. Consolidate electronic format submittals with multiples pages into a single file.
- F. Bookmarks:
  - 1. Bookmarks shall match the table of contents.
  - 2. Bookmark each section (tab) and heading.
  - 3. Drawings: Bookmark at a minimum, each discipline, area designation, or appropriate division.
  - 4. At file opening, display all levels of bookmarks as expanded.

**1.06 SUBMITTAL PROCEDURE**

- A. Contractor: Prepare submittal information in sufficient detail to show compliance with specified requirements:
  - 1. Determine and verify quantities, field dimensions, product dimensions, specified design and performance criteria, materials, catalog numbers, and similar data.
  - 2. Coordinate submittal with other submittals and with the requirements of the Contract Documents.
  - 3. Check, verify, and revise submittals as necessary to bring them into conformance with Contract Documents and actual field conditions.
- B. Contractor: stamp, sign and date submittals indicating review and approval:
  - 1. Signature indicates Contractor has satisfied submittal review responsibilities and constitutes Contractor's written approval of submittal.
  - 2. Submittals without Contractor's signature will be returned to the Contractor unreviewed. Subsequent submittal of this information will be counted as the first resubmittal.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- C. Contractor: Send submittal to City:
1. Provide specified number of copies of submittal.
  2. Delivery:
    - a. Deliver electronic submittals to City using web-based construction document management system described in Section 01 32 20 - Web Based Construction Document Management.
    - b. Deliver hard-copy submittals (if necessary) to City at the Center for Urban Waters, unless another mutually agreeable place is designated. Also submit submittal cover sheet using web-based construction document management system described in Section 01 32 20 - Web Based Construction Document Management.
  3. Timeliness: Schedule and make submissions and resubmissions in accordance with the requirements of the individual specification sections and in such a sequence as to cause no delay in Work.
  4. Contractor assumes risk of expense and delays when proceeding with work related to required submittals without review and acceptance.
- D. City: Review submittal and provide response:
1. Review description:
    - a. City will be entitled to rely upon the accuracy or completeness of designs, calculations, or certifications made by licensed professionals accompanying a particular submittal whether a stamp or seal is required by Contract Documents or Laws and Regulations.
    - b. City's review of submittals shall not release Contractor from Contractor's responsibility for performance of requirements of Contract Documents. City's review will not release Contractor from fulfilling purpose of installation or from Contractor's liability to replace defective work.
    - c. City's review of shop drawings, samples, or test procedures will be only for conformance with design concepts and for compliance with information given in Contract Documents.
    - d. City's review does not extend to:
      - 1) Accuracy of dimensions, quantities, or performance of equipment and systems designed by Contractor.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- 2) Contractor's means, methods, techniques, sequences, or procedures except when specified, indicated on the Drawings, or required by Contract Documents.
  - 3) Safety precautions or programs related to safety which shall remain the sole responsibility of the Contractor.
- e. City can accept or reject any exception at their sole discretion.
- 2. Review timeframe:
  - a. Except as may be provided in technical specifications, a submittal will be returned within 7 calendar days.
  - b. When a submittal cannot be returned within the specified period, City will, within a reasonable time after receipt of the submittal, give notice of the date by which that submittal will be returned.
  - c. City's acceptance of progress schedule containing submittal review times less than those specified or agreed to in writing by City will not constitute City's acceptance of review times.
  - d. Critical submittals:
    - 1) Contractor will notify City in writing that timely review of a submittal is critical to the progress of Work.
    - 2) City will provide decision on request.
    - 3) Written acceptance of request:
      - a) Written agreement by City to reduce submittal review time will be made only for unusual situations.
      - b) Written rejection of request.
- 3. Schedule delays:
  - a. No adjustment in Contract Times or Contract Price will be allowed due to City's review of submittals if:
    - 1) Contractor fails to submit appropriate submittals in adequate timeframe to procure necessary equipment and maintain project schedule.
    - 2) City has failed to review and return first submission within the agreed upon time frame.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- 3) Contractor demonstrates that delay in progress of Work is directly attributable to City's failure to return submittal within time indicated and accepted by City.
4. Review responses: 1 copy of submittal will be returned to Contractor with one of the following reviewer's response and stamp:
  - a. Reviewed:
    - 1) Contractor may proceed with the work described in the submittal.
  - b. Reviewed with Comments:
    - 1) Contractor shall incorporate all review comments into the work, but resubmittal of an amended submittal package is not required.
    - 2) Resubmit only the portion of package necessary to respond to City's comments.
  - c. Revise and Resubmit:
    - 1) Contractor shall incorporate the review comments into a complete revised package and resubmit it for review.
  - d. Rejected:
    - 1) Contractor shall review comments.
    - 2) Contractor shall develop a new submittal package with materials, equipment, methods, etc. that meet the requirements of the Contract Documents.
  - e. Submittal not reviewed, filed for record:
    - 1) Contractor has no further action required.
  - f. Submittal not reviewed:
    - 1) Submittals not required by these Contract Documents will be returned to the Contractor without review.
- E. Contractor: Prepare resubmittal, if applicable:
  1. Clearly identify each correction or change made.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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2. Include a response in writing to each of the City's comments or questions for submittal packages that are resubmitted in the order that the comments or questions were presented throughout the submittal:
  - a. Acceptable responses to City's comments are listed below:
    - 1) "Incorporated" City's comment or change is accepted, and appropriate changes are made.
    - 2) "Response" City's comment not incorporated. Explain why comment is not accepted or requested change is not made. Explain how requirement will be satisfied in lieu of comment or change requested by City.
  - b. Any resubmittal that does not contain responses to the City's previous comments shall be returned "Revise and Resubmit". No further review by the City will be performed until a response for previous comments has been received.
3. Review costs:
  - a. Costs incurred by City because of additional reviews of a particular submittal after the second time it has been reviewed shall be borne by Contractor. The cost of this will be equal to the actual invoiced amount by the City or City's representative for review.
  - b. Reimbursement to City will be made by deducting such costs from Contractor's subsequent progress payments.

**1.07 SUBMITTAL REQUIREMENTS**

A. General:

1. Submittals shall be made in electronic format in accordance with Section 01 32 20 - Web Based Construction Document Management. Electronic submittals shall be supplemented with paper documents, which either require original signatures or large format documents (greater than 11 by 17 inches).
2. All paper documents submitted by the Contractor shall be in accordance with the City of Tacoma's Sustainable Purchasing Policy (Resolution 38248). Documents shall be produced on recycled paper containing the highest level of post-consumer and recycled content available. At a minimum, paper with 30 percent post-consumer recycled content shall be used.
3. Number of hard copies: 5 minimum except where noted:

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- a. City: 3 copies.
- b. Engineer: 2 copies.
- c. Contractor: Remaining copies.

**1.08 SUBMITTALS**

- A. The Contractor shall submit the Contractor's Schedule of Submittals in accordance with the submittal timing requirements identified in the Submittal Schedule in this Section. Schedule of Submittals shall include updates to reflect the progression of the Project.
  - 1. The Contractor shall prepare and keep current, for review by the City, the Contractor's Schedule of Submittals which shall be coordinated with the Contractor's Project Schedule.
  - 2. The Contractor's Schedule of Submittals shall provide sufficient time for City submittal review as described in this Section.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION**

**3.01 SCHEDULE OF SUBMITTALS**

- A. Check each Specification Section for the complete submittal requirements.
  - 1. The Schedule of Submittals in the table below identifies in broad terms the general nature of the submittals that are required from the Contractor. This is not a complete list of all submittals required for the Project.
  - 2. The information contained in this Schedule of Submittals is provided for the convenience of the Contractor.
  - 3. This list may not be complete.
  - 4. This list may not include submittals required in Division 00.
- B. References to "prior to use", "prior to installation" or similar, in the Latest Allowable Submittal Date is the requirement for the Contractor to have received a submittal approval from the City.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

<b>Project Manual Section</b>	<b>Section Title</b>	<b>Submittal</b>	<b>Submittal Date</b>
01 11 00	Summary of Work	Permits, licenses, certifications, inspection reports, receipts for fee payments, and similar documents, correspondence, and records	Within 48 hours of receiving documents, correspondence, and records from agencies
01 14 00	Work Restrictions	Request for variance from normal work hours	7 days prior to requested variance
01 29 40	Application for Payment	Application for Payment and Substantiating Data with cover letter	Monthly
		Progress payment requests	Monthly
		Schedule of Values	On the day of Pre-Construction Meeting
01 31 00	Project Management and Coordination	Project Schedule	On the day of Pre-Construction Meeting
		Progress Meeting Documents	Every week 24 hours prior to weekly construction meetings
		Progress Meeting Minutes	Within 48 hours after weekly construction meeting.
		Daily Construction Reports	Every day
		Project Management and Coordination Plan	On the day of Pre-Construction Meeting
01 33 00	Submittal Procedures	Contractor's Schedule of Submittals	On the day of Pre-Construction Meeting and every week thereafter

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

<b>Project Manual Section</b>	<b>Section Title</b>	<b>Submittal</b>	<b>Submittal Date</b>
01 35 00	Health and Safety Requirements	Site-specific Health and Safety Plan	On the day of Pre-Construction Meeting
		Certificates of Personnel HAZWOPER Training	On the day of Pre-Construction Meeting
		Summary of Daily Safety Meeting Minutes	As requested by City
01 51 00	Temporary Utilities	List of temporary utilities; Drawing depicting locations and sizes of temporary utilities	On the day of Pre-Construction Meeting
		Permits and Inspection Reports from Utility Providers	Within 48 hours of receiving, it from Utility Providers
01 57 00	Temporary Environmental Controls and Monitoring	Materials to be used for Temporary Environmental Controls	2 weeks prior to use on site.
		Vehicle Inspection Logs	As requested by the City
01 77 00	Closeout Procedures	Performance Bond	Prior to Final Acceptance
01 78 39	Project Record Documents	Draft Project Record	At Substantial Completion Inspection
		Final Project Record	Prior to Final Completion
		Progress Red-Line Drawings	Prior to Progress Payment
		Final Red-Line Drawings	14 days after Substantial Completion
02 22 00	Existing Conditions Assessments	Photos, videos, and notes to document existing conditions assessment	1 week prior to commencing site preparation, clearing, or grubbing activities

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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<b>Project Manual Section</b>	<b>Section Title</b>	<b>Submittal</b>	<b>Submittal Date</b>
31 00 00	Earthwork	Earthwork Plan	Seven days prior to the commencement of excavation
		Pertinent material source and associated test records	Seven days prior to the commencement of excavation
		Daily Activities Report	At the end of each week throughout construction
31 11 00	Site Preparation, Clearing and Grubbing	Site Preparation, Clearing and Grubbing Plan	On the day of Pre-Construction Meeting
		Recycling/disposal facility weight tickets	As part of progress payment request
		Results of Site Preparation Site Visit	1 week prior to performing site preparation, clearing and grubbing work.
		Daily Report	At the end of each week throughout construction
		Daily shipment log sheets	On the workday following stone shipment

**END OF SECTION**



City of Tacoma

Environmental Services Department

Transmittal of Solid Waste Management Landfill Gas Flare Station Cap Repair Project  
Submittal (attached to each submittal)

**TO:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Submittal No.:** \_\_\_\_\_

☐ New Submittal      ☐ Resubmittal

**Project:** \_\_\_\_\_

**Project No.:** \_\_\_\_\_

**Specification No.:** \_\_\_\_\_

**FROM:** \_\_\_\_\_

**Submittal Type:**    ☐ Shop Drawing    ☐ Sample    ☐ Informational  
                                 ☐ Deferred

No. of Copies	Description of Item Submitted (Type, Size, Model No., Etc.)	Spec and Para No.	Drawing or Brochure No.	Contains Variations to Contract	
				No	Yes

Contractor certifies that (i) Contractor has complied with the requirements of Contract Documents in preparation, review, and submission of designated Submittal and (ii) the Submittal is complete and in accordance with the Contract Documents and requirements of laws and regulations and governing agencies.

By: \_\_\_\_\_

Contractor (Authorized Signature)

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**

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**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**  
**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.
- B. In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work, and other persons who may be affected by the Work; prevent damage to property, materials, supplies, and equipment, whether onsite or stored offsite; and prevent damage to other properties adjacent to the site. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property, or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.
- C. Nothing provided in this Section shall be construed as imposing any duty upon the City or the Engineer with regard to, or as constituting any express or implied assumption of control or responsibility over, Project Site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

**1.02 SUBMITTALS**

- A. The Contractor shall submit a Site-specific health and safety plan as follows:
  - 1. This health and safety plan must be followed by the Contractor; and
  - 2. A minimum of one (1) copy shall be available and accessible at the Project Site at all times.
- B. Submit certificates of personnel training for HAZWOPER to the City prior to the pre-construction meeting and update during the project as needed.
- C. Maintain a summary of minutes from daily safety meetings on file. Submit to the City when requested.
- D. Provide submittals for the City's review in accordance with the submittal timings requirements of Section 01 33 00 – Submittal Procedures.

**PART 2 – PRODUCTS (NOT USED)**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**

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**PART 3 – EXECUTION**

**3.01 PERSONNEL DISCLOSURE AND TRAINING**

- A. Contractor shall provide all persons working on the Project Site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information: At a minimum, Contractor shall inform persons working on the Project Site of:
    - a. The requirements of Chapter 296-62 WAC, General Occupational Health Standards.
    - b. Exposure to hazardous chemicals is not anticipated as areas of excavation are outside the limits of the CDF.
  2. Training: At a minimum, Contractor shall provide training for persons working on the Project Site, which includes:
    - a. Contractor's and their subcontractor's personnel shall be trained in accordance with the requirements of Chapter 296- 62/-843 WAC, Occupational Safety and Health Administration (OSHA) and Washington Industrial Safety and Health Act (WISHA).
    - b. While exposure to hazardous chemicals is not expected, Contractor's and their sub-contractors' personnel working at the site and personnel that have potential for exposure to site contamination shall be current on their OSHA 40-hour Hazardous Waste Operations and Emergency Response Standards (HAZWOPER) training.
    - c. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.).
    - d. The physical and health hazards of the chemicals in the work area.
    - e. The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project Site from

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**

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exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

3. The details of the hazard communication program developed by Contractor or its Subcontractors, including an explanation of the labeling system and the MSDS, and how employees can obtain and use the appropriate hazard information.

**3.02 EXPOSURE AND SAFETY MANAGEMENT**

- A. Contractor shall be responsible for achieving and maintaining a safe work site.
- B. Contractor shall promptly notify the City of all spills or releases of any hazardous substances that are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify the City of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project Site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project Site.
- C. All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians working and using the site for disposal or in performance of their work.
  1. All arrangements to care for such traffic shall be Contractor's responsibilities.
  2. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- D. Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to the City. The City shall, always, have a right of access to all records of exposure.
- E. The Contractor shall furnish, erect, and maintain such fences, barriers, lights, and signs and provide such flagging and guards as are necessary in the opinion of the City to give adequate warning to the City's on-site operations, tenant property owner and their employees, contractors, and customers and of any dangerous condition which may be encountered as a result thereof.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**

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- F. The Contractor shall meet all safety requirements of WAC 296-155-650 Part N, Excavation, Trenching, and Shoring (if applicable).
- G. Contractor shall supervise construction activities to ensure that no part of the Work, completed or in progress, shall be subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
  - 1. Excessively high or low temperatures
  - 2. Excessive high or low humidity
  - 3. Water or ice
  - 4. Chemicals
  - 5. Heavy traffic
  - 6. Unprotected storage
  - 7. Improper shipping or handling
  - 8. Theft
  - 9. Vandalism

**3.03 EMERGENCIES**

- A. In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- B. Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to the City. The City shall, always, have a right of access to all records of exposure.

**3.04 SAFETY EQUIPMENT**

- A. The Contractor shall maintain, at the job site, first-aid and safety equipment applicable to the work as prescribed by the governing safety authorities. All required safety equipment shall be kept in fully operational condition for the duration of the Contract. The Site Health and Safety Officer shall have appropriate instrumentation (detector[s]) to test for oxygen deficiency and for the presence of methane gas and hydrogen sulfide gas. A personal gas monitor (such as Lumidor PGM13, GasTech

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**

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GX-82, GasTech Model 1641, MSA Orion, MSA Solaris or similar unit[s]) shall be available at the work site for this purpose. The Site Health and Safety Officer shall periodically calibrate the instruments in accordance with the manufacturer's requirements and recommendations and regularly test the excavation areas, and other work space for safe working conditions and ensure that appropriate safety equipment is available at the site.

- B. All personnel shall be trained in the use of the appropriate safety equipment that would be utilized during the course of the work. The Site Health and Safety Officer shall ascertain that the safety equipment is being used when appropriate and/or required.

**3.05 HEALTH AND SAFETY PLAN REQUIREMENTS**

- A. Prepare a Site Health and Safety Plan (HASP) in accordance with OSHA 29 CFR 1910.120 and all applicable Washington State regulations. As a minimum, the Contractor's Site HASP shall set forth definite procedures for informing workers about health and safety, for instructing workers in safe practices, for assuring that workers are using appropriate safety equipment and safe work practices and for reporting accidents. Also include:
1. Description of work to be performed and anticipated chemical and/or physical hazards associated with the work.
  2. A series of maps of the Site illustrating the locations of anticipated hazards and areas of control for those hazards.
  3. Hazardous material inventory and material safety data sheets (MSDSs) for all chemicals which will be brought on site.
  4. Engineering controls/equipment to be used to protect against anticipated hazards.
  5. Personal protective equipment and clothing including head, foot, skin, eye, ear, and respiratory protection.
  6. Procedures which will be used for:
    - a. Lockout/tagout.
    - b. Fall protection.
    - c. Hazards.
    - d. Suspect materials.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**

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- e. Confined space entry.
    - f. Odorous conditions and toxic gases.
  - 7. Exposure monitoring to be used to evaluate actual hazards compared with anticipated conditions.
  - 8. Site housekeeping procedures and personal hygiene practices.
  - 9. Personnel and equipment decontamination plan, if necessary.
  - 10. Administrative controls.
  - 11. Emergency plan including:
    - a. Locations of and route to nearest hospital.
    - b. Locations of first aid kits, fire extinguishers, and portable eye washes.
    - c. Person who will be responsible in the event of an emergency.
    - d. Site personnel trained in first aid and/or CPR.
  - 12. Medical surveillance program for site personnel before, during, and after completion of site work.
  - 13. Name and qualifications of person preparing the Site HASP and person designated to implement and enforce the plan.
  - 14. Signatory page for site personnel and visitors to acknowledge receipt, understanding, and agreement to comply with the plan.
- B. The Site Health and Safety Plan shall include information on how the Contractor will address the impact of landfill gas in the work area and institute procedures to inform all workers and site visitors of the potential for the presence of methane and other landfill gases emanating from the natural decomposition of refuse buried at or near the job site and the importance of safety precautions to ensure the safety of workers and the public. During construction, the workspace should be monitored for concentrations of methane and hydrogen sulfide. Workers shall not be permitted to enter a workspace where there is an oxygen deficiency or a combustible mixture of gases without appropriate protection. Positive fan-forced ventilation to dilute gas mixtures and avoid oxygen deficiency should be provided when work is necessary in any workspace.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 00 – HEALTH AND SAFETY REQUIREMENTS**

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- C. Conduct daily tailgate safety meetings/job safety briefings and prepare minutes to be submitted to the City upon request. The Contractor shall prepare his/her own form on which to document daily safety meetings. This form shall be completed each workday and filed as part of the project record. The Contractor shall submit a summary of minutes from daily safety meetings when requested by the City.
- D. If Health and Safety issues arise frequently, the Contractor may be required to provide an additional full-time Health and Safety professional on site, at the expense of the Contractor, to ensure compliance with all applicable Health and Safety rules and regulations.

**3.06 CONTRACTOR'S SITE SAFETY AND HEALTH OFFICER**

- A. Contractor shall provide a person designated as the Site Safety and Health Officer, who is thoroughly trained in rescue procedures, HAZWOPER, and the use of all necessary safety equipment. The person must be always present while work is being performed.
- B. The Contractor's designated Site Safety and Health Officer shall conduct inspections of the site in accordance with the Site HASP to determine the HASP's effectiveness and shall immediately correct any deficiencies identified.
- C. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.
- D. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.

**3.07 PERSONAL PROTECTIVE EQUIPMENT**

- A. The Project Site is designated for modified Level D personal protective equipment (PPE) as defined by OSHA, which includes a hard hat, steel toe boots, high-visibility vest, and safety glasses.

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 00 – REGULATORY REQUIREMENTS**

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**SECTION 01 41 00 – REGULATORY REQUIREMENTS**  
**PART 1 – GENERAL**

**1.01 AUTHORITY OF CODES, ORDINANCES AND STANDARDS**

- A. All codes, ordinances and standards referenced in the Contract Documents shall have the full force and effect as though printed in the entirety in the Contract Documents.

**1.02 PRECEDENCE OF CODES, ORDINANCES AND STANDARDS**

- A. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
- B. Where the Contract Documents requires or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Contract Documents shall take precedence so long as such increase is legal.
- C. Where no requirements are identified in the Contract Documents, comply with all requirements of applicable codes, ordinances and standards of authorities having jurisdiction.

**1.03 APPLICABLE CODES, LAWS AND ORDINANCES**

- A. Performance of the Work shall be governed by all applicable laws, ordinances, rules and regulations of Federal, State, and local governmental agencies and jurisdictions having authority over the Project.
- B. Performance of the Work shall meet or exceed the minimum requirements of the series of Codes published by the International Code Council (ICC) and the National Electrical Code (NEC), as adopted and interpreted by local authorities having jurisdiction.
- C. Performance of the Work shall be accomplished in conformance with all rules and regulations of public utilities, utility districts and other agencies serving the facility.
- D. Where such laws, ordinances, rules, and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules, and regulations occur subsequent to the execution date of the Contract Documents.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 00 – REGULATORY REQUIREMENTS**

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**1.04 DATE OF CODES, LAWS AND ORDINANCES**

- A. The applicable edition of all codes shall be that adopted at the time of issuance of permits by authorities having jurisdiction or the execution of the Contract Documents, whichever is applicable, and shall include all modifications and additions adopted by that jurisdiction and the City. The applicable date of laws and ordinances shall be that of the date of performance of the Work.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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**SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**  
**BID FORM - SCHEDULE OF VALUES**

**(Not including Washington State Sales Tax)**

<b>Item No.</b>	<b>Item of Work</b>	<b>Unit</b>	<b>Estimated Quantity</b>	<b>Total Price (numbers, in U.S. dollars)</b>
<b>A</b>	Mobilization/Demobilization and General Requirements	LS	1	\$
<b>B</b>	Demolition, Excavation and Stockpiling	LS	1	\$
<b>C</b>	Placement of Geosynthetic Materials	LS	1	\$
<b>D</b>	Placement of Cover Soil Materials	LS	1	\$
<b>E</b>	Site Restoration	LS	1	\$
<b>N</b>	Site Restoration	LS	1	\$
<b>Total Base Bid</b>				<b>\$</b>

**PART 1 – GENERAL**

**1.01 Description of Measurement of Work**

- A. This Section includes a description of the requirements and procedures for measurement of Work performed, the documentation required to verify the amount of Work, and procedures for obtaining payment for the Work performed.
- B. The Work, as described in the Contract Documents, for which payment will be made is to be completed on a lump sum basis, as described in this specifications section.
- C. The payment made for each item listed as lump sum will constitute full compensation for furnishing all labor, materials, and equipment, and performing any associated Contractor quality control and all associated Work required for that lump sum item for which separate payment is not otherwise provided.
- D. Applicable Technical Specifications
  - Section 01 11 00 Summary of Work
  - Section 01 14 00 Work Restrictions

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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Section 01 29 40	Applications for Payment
Section 01 31 00	Project Management and Coordination
Section 01 32 20	Web Based Construction Document Management
Section 01 33 00	Submittal Procedures
Section 01 35 00	Health and Safety Requirements
Section 01 41 00	Regulatory Requirements
Section 01 45 00	Construction Quality Control
Section 01 77 00	Closeout Procedures
Section 01 78 39	Project Record Documents
Section 02 41 00	Demolition
Section 31 05 13	Earthwork for Landfill Cap Repair
Section 31 05 19.13	Geotextiles
Section 35 05 19.16	Geomembranes
Section 35 05 19.29	Geonets

**E. Applicable Drawings**

Sheet 1	Cover Sheet
Sheet 2	General Notes
Sheet 3	Site Plan
Sheet 4	Flare Station Pad Liner Repair Details

**1.02 Bid Descriptions**

**A. MOBILIZATION/DEMOBILIZATION AND GENERAL REQUIREMENTS**

**1. Work Description:**

This Bid Item includes, but is not limited to, mobilization/demobilization of personnel, equipment, supplies and incidentals to/from the project site; obtaining project-specific bonds and insurances; project administration and management; coordination and supervision of contractor's subcontractors and

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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suppliers work; coordination and meetings with the City, City's representatives and regulatory agencies; preparation of all required submittals; obtaining construction-related permits that have not been obtained already by the City (if a need is determined); maintaining construction quality control; implementing health and safety requirements; and completing construction closeout procedures, as specified in the Contract Documents, that are not identified as a separate pay item in the project's Schedule of Values.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this lump sum item.

2. Measurement and Payment

- a. Mobilization/Demobilization and General Requirements in the project's Schedule of Values shall not exceed 10% of the amount of the Total Base Bid.
- b. Mobilization/Demobilization and General Requirements will be paid as a percentage of this item's lump sum value provided in the project's Schedule of Values based upon the percentage of actual construction completed at the time of the payment estimate.
- c. Mobilization/Demobilization and General Requirements payment in first progress payment shall not exceed 50% for this item.

B. DEMOLITION, EXCAVATION AND STOCKPILING

1. Work Description:

This bid item includes, but is not limited to, completing excavation along both the Flare Station Pad and the West Concrete Pad to the lines and grades shown on the Contract Drawings and stockpiling material suitable for reuse. The Contractor shall dispose of any excavated material that is deemed not suitable for reuse by the City at an approved location.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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control, transportation, or other incidental activities associated with this item.

2. Measurement and Payment:

*Bid Item (BES), Excavation and Stockpiling* will be paid as a lump sum value.

C. PLACEMENT OF GEOSYNTHETIC MATERIALS

1. Work Description:

This Bid Item includes, but is not limited to, procuring, and placing geosynthetic materials (geomembrane, geonet and geotextile) in accordance with the requirements of Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this item.

2. Measurement and Payment:

*Bid Item (C), Placement of Geosynthetic Materials* will be paid as a lump sum item.

D. PLACEMENT OF COVER SOIL MATERIAL

1. Work Description:

This Bid Item includes, but is not limited to, placing imported and stockpiled backfill material to lines and grades shown in the Contract Drawings and in accordance with the requirements of Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this item.

2. Measurement and Payment:

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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*Bid Item (D), Placement of Cover Soil Material* will be paid as a lump sum value.

**E. SITE RESTORATION**

**1. Work Description:**

This Bid Item includes, but is not limited to, completing site restoration including restoration of construction access areas, project site and site cleanup in accordance with the requirements of Contract Documents.

Contractor shall provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

No additional payment will be made for supervision, safety, quality control, environmental protection measures, dust control, noise control, transportation, or other incidental activities associated with this unit price item.

**2. Measurement and Payment:**

*Bid Item (E), Site Restoration* will be paid as a percentage of this item's lump sum value provided in the project's Schedule of Values based upon the percentage of work completed under this item at the time of the payment estimate.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL**

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**SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL**  
**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. This section describes the Contractor's general quality control requirements, duties, and responsibilities during execution of the Contract Work. Detailed quality control requirements are presented in individual Sections of the Specifications.
- B. The Contractor shall establish, provide, and maintain effective quality control methods and procedures that will be taken to assure that all materials and completed construction conform to requirements of the Contract Documents and manufacturer's recommendations. Although the guidelines are established and certain minimum requirements are specified herein and elsewhere in the Contract Documents, the Contractor shall assume full responsibility for accomplishing the stated purpose.
- C. The Contractor shall be prepared to discuss and present at the Pre-construction Meeting its understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials until quality control requirements of the Contract Documents are met.

**1.02 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturer's instructions, including each step in the sequence.
- C. Should manufacturer's instructions conflict with the Contract Documents, request clarification from the City before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- E. Persons performing work shall be qualified to produce required and specified quality.

**1.03 REFERENCES AND STANDARDS**

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with the requirements of the standard, except where more rigid requirements are specified by applicable codes.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL**

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- B. Conform to references and standards by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION**

**3.01 CONTRACTOR QUALITY CONTROL**

- A. Documentation

The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, proposed corrective action; and corrective actions taken.

- B. Non-compliance

The City may notify the Contractor of any non-compliance with project quality control requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Failure to take corrective action shall be grounds for the City to withhold payment for those items not performed based on the costs for the items as listed in the Bid Items/Schedule of Values.

In cases where quality control activities do not comply with the contract provisions, or where the Contractor fails to properly operate and maintain effective quality control, as determined by the City, the City may:

1. Direct the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.
2. Carry out the functions and operations of the Contractor's quality control requirements. Costs incurred by the City to implement quality control requirements of the Contract Documents that are Contractor's responsibility or to otherwise remedy the Contractor's non-compliance with quality-related provisions of the Contract shall be deducted from the total amount due the Contractor.
3. Order the Contractor to stop operations until appropriate corrective actions are taken.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 45 00 – CONSTRUCTION QUALITY CONTROL**

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- C. Any failure by the City to notify the Contractor of any non-compliance with any of the foregoing requirements shall not be deemed as a waiver of its enforcement rights hereunder and that the Contractor is still bound by the terms and conditions of said requirement.

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 51 00 – TEMPORARY UTILITIES**

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**SECTION 01 51 00 – TEMPORARY UTILITIES**  
**PART 1 – GENERAL**

**1.01 TEMPORARY UTILITY SOURCES**

- A. Contractor shall anticipate furnishing all temporary utility needs to complete the Work. This shall include, but not be limited to, electricity and water for office trailer (if provided) and dust control.
- B. Where such temporary connections can be made, the utility service consumed shall be charged to and paid for by the Contractor.
- C. Contractor shall, at its expense and in a skillful manner satisfactory to the City, install and maintain the temporary connections and distribution lines, together with appropriate protective devices and all meters required to measure the amount of each utility used.
- D. Prior to the date of Final Completion unless otherwise authorized by the City in writing, Contractor shall remove all temporary connections, distribution lines, meters and associated equipment and materials.

**1.02 TEMPORARY ELECTRICAL SERVICE**

- A. If required, the Contractor shall furnish and install electrical service from nearest appropriate transformer location. Contractor shall furnish and install main service disconnect and over-current protection. Contractor shall furnish and install electrical connections from main service disconnect to Contractor's facilities and equipment and to office trailers, if provided.
- B. Alternately, Contractor may provide electrical power to temporary facilities with an appropriate dedicated whisper-quiet generator that satisfies the City of Tacoma's Noise Ordinance.
- C. A licensed electrician shall perform all electrical work.
- D. Contractor shall pay all electric usage costs necessary for temporary facilities and equipment for the Work.
- E. All electrical connections shall meet appropriate National Electrical Manufacturer Association (NEMA) ratings consistent with the intended service.
- F. Contractor shall coordinate with local electric utility and obtain any necessary inspections and permits at the Contractor's expense.
- G. Contractor shall provide grounded electrical extension cords and use "hard- service" cords where exposed to abrasion and traffic. Waterproof

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 51 00 – TEMPORARY UTILITIES**

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connectors shall be provided by Contractor to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress.

- H. Contractor shall provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.

**1.03 TEMPORAY WATER SERVICE**

- A. Contractor shall provide, maintain, and pay for suitable quantity and quality of water service for dust control and decontamination.
- B. Contractor shall provide water conveyance from the water service terminus to any locations on the Project Site where water is used.
- C. Where such temporary connections can be made, the utility service consumed shall be charged to and paid for by the Contractor.
- D. Contractor shall provide, maintain, and pay for a suitable quantity of potable drinking water. Contractor shall provide potable water approved by local health authorities, in sufficient quantity to perform the Work and comply with state regulations and requirements. Subcontractor shall furnish drinking water in Subcontractor's field office trailer (if provided) and, if necessary at other locations near the Work being conducted.
- E. Contractor shall, at its expense and in a skillful manner satisfactory to the City, install and maintain the temporary connections and distribution lines, together with appropriate protective devices and all meters required to measure the amount of each utility used.
- F. Prior to the date of Final Completion unless otherwise authorized by the City in writing, Contractor shall remove all temporary connections, distribution lines, meters and associated equipment and materials.

**1.04 SUBMITTALS**

- A. Contractor shall prepare and submit a list of temporary utilities and identify planned locations and sizes of temporary utilities that the Contractor plans to use for construction.
- B. Contractor shall provide copies of permits and inspection reports obtained from utility providers.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 51 00 – TEMPORARY UTILITIES**

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**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION**

**3.01 GENERAL INSTALLATION**

- A. Contractor shall use qualified personnel for installation of temporary utilities and shall relocate and modify facilities during construction as required.
- B. The Contractor may engage the appropriate local utility company to install temporary service or connect to existing service, provided such installation or connection does not interfere with utility service or add cost to the City.
  - 1. Contractor is responsible for obtaining easements to bring temporary utilities to Project Site areas.
  - 2. Installation and usage of utilities for temporary construction facilities are incidental to the work performed by the Contractor.
- C. Contractor shall provide each temporary utility ready for use when needed to avoid delay to the Work and shall maintain and modify each facility as required.
  - 1. Do not remove until facilities are no longer needed.

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 52 00 – CONSTRUCTION FACILITIES**

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**SECTION 01 52 00 – CONSTRUCTION FACILITIES**  
**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Temporary construction support facilities required for the Work include, but are not limited to, the following:
  - 1. First aid facilities.
  - 2. Fire extinguishers.
  - 3. Sanitary services, including drinking water.
  - 4. Temporary field offices, if needed.
  - 5. Construction fencing, barriers, barricades, warning signs and lights.
- B. Contractor shall comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
  - 1. Building Code requirements, including local requirements, standards, and regulations where more restrictive.
  - 2. Health and safety regulations.
  - 3. Utility company regulations.
  - 4. Police, Fire Department and Rescue Squad rules.
  - 5. Environmental protection regulations.
- C. Contractor shall keep temporary services and facilities clean and neat in appearance.
  - 1. Operate in a safe and efficient manner.
  - 2. Take necessary fire prevention measures.
  - 3. Do not overload facilities or permit them to interfere with progress.
  - 4. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on the Project Site.
- D. Contractor shall provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air,

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 52 00 – CONSTRUCTION FACILITIES**

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waterways and soil might be contaminated or polluted; or that any other undesirable effects might result.

1. Avoid use of tools and equipment which produce harmful noise.
2. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or other entities located in or near the Project Site.

**PART 2 – PRODUCTS**

**2.01 MATERIALS AND EQUIPMENT**

- A. Provide new materials to be used or, if acceptable, to the City, undamaged previously used materials in serviceable condition. Provide materials suitable for the use intended.
- B. Contractor shall provide sufficient first aid supplies and equipment to comply with governing regulations and requirements.
- C. Contractor shall provide hand-carried, portable, UL22 rated, class “ABC” dry chemical extinguishers, or a combination of extinguishers of National Fire Protection Association (NFPA) recommended classes for the exposures.
  1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposures.
  2. Provide additional protection as may be required by the local Fire Marshal.
- D. For safety barriers and similar uses, Contractor shall provide UL labeled fire treated 2x4 studs and minimum 5/8” thick exterior plywood (if applicable).

**PART 3 – EXECUTION**

**3.01 GENERAL INSTALLATION**

- A. Contractor shall use qualified personnel for installation of temporary facilities and shall relocate and modify facilities during construction as required.
- B. Contractor shall provide each facility ready for use when needed to avoid delay to the Work and shall maintain and modify each facility as required.
  1. Do not remove until facilities are no longer needed.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 52 00 – CONSTRUCTION FACILITIES**

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2. Remove prior to Final Completion or as agreed to by the City.
- C. Contractor shall locate staging areas, sanitary facilities and other temporary construction and support facilities for easy access and in the location within the project area, unless otherwise identified and agreed to in writing between the City and the Contractor.

**3.02 SANITARY AND OFFICE FACILITIES**

A. Sanitary Facilities

1. Contractor shall install and maintain self-containing, single-occupant sanitary toilet facilities for the duration of the Project. Toilets shall be of the chemical type and shall be removed prior to Final Completion.
2. Contractor shall provide and maintain hand washing stations for the duration of the Project.
3. The number of toilet facilities and hand washing stations shall be provided in accordance with applicable laws and regulations.
4. Contractor shall provide fresh drinking water for employees.

B. Office Facilities

1. If desired, Contractor may install and maintain necessary field office space for the duration of the Project. Office space shall be removed prior to Final Completion. Office location would need to be approved by the City.

**3.03 CONSTRUCTION BARRIERS, BARRICADES, WARNING SIGNS, AND LIGHTS**

- A. Contractor shall comply with standards and code requirements for erection of structurally adequate barriers and barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
- B. Contractor shall comply with the standard requirements of the City of Tacoma applicable to barriers, barricades, warning signs and lights.

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**

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**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**  
**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Contractor shall provide temporary environmental controls during construction including but not limited to temporary erosion and sediment controls (TESC) as indicated on the Plans, dust and air emissions controls, noise controls, site maintenance, oil spill prevention and control and vehicle inspection.
- B. The information provided in the Contract Documents shall be considered a minimum for the anticipated construction conditions. Additional controls and BMPs necessary to protect environmental quality in accordance with the requirements of Contract Documents, federal, state, and local substantive requirements, laws and regulations shall be provided by the Contractor.
- C. The Contractor shall coordinate installation and inspections of the temporary environmental controls and BMP's with the City, as necessary.

**1.02 PERMIT/SUBSTANTIVE REQUIREMENTS APPLICABLE TO ENVIRONMENTAL QUALITY**

- A. The Contractor shall adhere and conform to all applicable provisions, conditions, and requirements of the federal, state, and local substantive requirements.
- B. The Contractor shall comply with all applicable federal, state, and local substantive requirements, laws, and regulations.

**1.03 SEQUENCING AND SCHEDULING**

- A. The implementation of temporary environmental controls must be coordinated by the Contractor with all site preparation and material placement activities, and in such a manner as to ensure that sediment-laden water does not enter the City storm or sewer systems, violate applicable local, state, and federal water standards, or adversely impact adjacent properties.
  - 1. Contractor shall install and verify the working condition of all temporary environmental controls and BMPs in Work areas at the Project Site prior to any clearing, grubbing, excavation or other construction.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**

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2. Temporary environmental control items shall be installed and replaced, as necessary, at various times throughout the construction duration.

**1.04 TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES**

- A. Where possible, maintain natural vegetation for silt control.
- B. Prevent silt-laden water from leaving the Project Site or from entering the on-site storm catch basins or the sanitary sewer system.
- C. Contractor shall locate existing catch basins as shown on the Contract Drawings and related storm water drainage features that may be impacted by construction activities during the Project. Protection of catch basins and related storm water drainage features shall be implemented and coordinated with the Work by the Contractor.
- D. All slopes, cut, or fill areas where Work has stopped for more than 30 days shall be stabilized by mulching, polyethylene sheeting or other method to prevent erosion and sediment transport.
- E. Contractor shall establish TESC as shown on the Contract Drawings and as per applicable regulatory requirements.
- F. Construction entrance shall be stabilized using quarry spalls underlain by geotextile fabric as shown on the Contract Drawings to ensure that creation of mud and escape of sediment laden water is avoided.
- G. Contractor shall ensure and maintain a Vehicle Inspection Log to document that all trucks and equipment leaving the Project Site have been properly inspected and cleaned prior to operating on public streets. Contractor shall ensure that tailgates are secured and cleaned, tarp covers are in place and properly secured and truck exteriors/wheels are cleaned.
- H. Conditions permitting, dry cleaning methods are encouraged. Dry cleaning methods include, but are not limited to, brushing loose materials with the use of broom and/or brushes.
- I. Based on site/weather condition and/or Contractor's methodology for performing Contract Work, water cleaning methods may be necessitated to avoid tracking materials off site. The Contractor shall provide wheel washing facility on site, if necessary, and shall turn it on if this appears that dry cleaning methods are not sufficient. The Contractor shall provide all materials and equipment to collect, contain, store, and treat cleaning rinse water as needed, until disposal.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**

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- J. Keep all off-site parking areas and streets clean from construction activities. Tracking for sediment on Owner's property roads or on public street is not allowed.
  - 1. Contractor shall keep paved surfaces clean using mechanical sweeping equipment, hand shovels and brooms or other accepted methods suitable of removing dirt, rock, silt and sand.
  - 2. No street washing will be allowed, unless otherwise approved by the City.
- K. At project completion, all areas damaged by TESC shall be repaired to pre- construction conditions.

**1.05 DUST CONTROL**

- A. Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials shall be always controlled including weekdays, weekends, holidays and hours when work is not in progress.
- B. The Contractor shall maintain areas free from particulates which would cause OSHA PEL respirable dust standards to be exceeded or which would cause a hazard or nuisance.
- C. Water sprinkling will be permitted to control particulates in the work area upon approval of the City. Contractor must have sufficient equipment and personnel at the site available to accomplish these tasks.
- D. Contractor shall provide all labor, materials, and equipment, including water trucks needed to limit visible dust generation.
- E. Contractor shall provide dust control measures required by all applicable regulatory requirements.

**1.06 NOISE CONTROL**

- A. Contractor shall be responsible for conducting all Work in accordance with applicable local, state, and federal Laws and Regulations concerning noise or sound levels including the City of Tacoma noise control requirements (Tacoma Municipal Code [TMC] Chapter 8.122).
- B. The City will have authority to direct Contractor to stop Work or modify Work methods or activities as necessary, to comply with the City of Tacoma noise control requirements (TMC Chapter 8.122) and other applicable codes.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**

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- C. Workers shall not be exposed to noise levels that exceeds OSHA and NIOSH permissible noise exposure limits.
- D. Contractor shall always control the Work, such that sound levels measured at or within a receiving property do not exceed the ambient sound level (established by OSHA and NIOSH) by 10 dBA outdoors and 6 dBA indoors (7 AM to 10 PM), and 5 dBA outdoors and 3 dBA indoors (10 PM to 7 AM) per the City of Tacoma's noise control ordinance requirements.
- E. Contractor's vehicles and equipment shall be outfitted with mufflers and other sound attenuating equipment.

**1.07 SPILL PREVENTION AND CONTROL**

- A. An emergency spill containment kit shall be located on site containing an adequate supply of materials to control and contain deleterious materials in the event of an accidental spill.
- B. Fueling and waste storage areas shall be distinctly identified and established only within the Project area. No additional fueling and waste storage areas shall be established by the Contractor without prior approval from the City. The area will be equipped with spill prevention and control materials.
- C. The Contractor shall be responsible for prevention, containment, and cleanup of spills associated with oil, solvent, fuel, and other petroleum products used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.
- D. The Contractor shall, at a minimum, take the following measures regarding spill prevention, containment, and cleanup:
  - 1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums, and other equipment and facilities shall be inspected regularly for drips, leaks, or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
  - 2. Secondary containment shall be placed under any equipment or tank stored on site. All oil and products storage tanks shall be diked or located to prevent spills from escaping to catch basins, waterways, other underground utilities or on streets. Diking and soils shall be lined with impervious material to prevent oil from seeping through the ground and dikes.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**

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3. All visible oil spills shall be immediately contained using dikes, straw bales, or other appropriate means and removed using sand, ground clay, sawdust, or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed off-property at an approved facility. Any manifest from the disposal facility shall be provided to the City.
4. In the event of any oil or product discharges into waters of the state, or onto land with a potential for entry into waters of the state, the Contractor shall immediately notify the following two agencies at their listed 24-hour response numbers. The Contractor shall also notify the City's Environmental Compliance Section at 253-502-2222 and the construction management personnel assigned to the project.
  - Washington Department of Ecology Spill Hotline 1-800-OILS911 (1-800-6457911).
  - National Response Center: 1-800-424-8802

**1.08 EMERGENCY/CONTINGENCY MEASURES**

- A. Any work that is out of compliance with the provisions of these Contract Documents, the Contractor shall immediately take the following actions:
  1. Cease operations that are causing the compliance problem.
  2. Assess the cause of the issue and take appropriate measures to correct the problem and/or prevent further environmental damage.
  3. Immediately notify the City.
  4. In the event of a discharge of oil, fuel, or chemicals into the City's storm system leading to state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Notify Washington Department of Ecology Spill Hotline immediately at the contact provided in Article 1.10 (Spill Prevention and Control). Cleanup shall include proper disposal of any spilled material and used cleanup materials.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND**  
**MONITORING**

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**1.09 VEHICLE INSPECTION**

- A. The Federal Motor Carrier Safety Regulation (FMCSR) § 396.13 Driver Inspection requires that each driver perform a pre-trip visual and confirmation inspection prior to starting to drive a vehicle. The driver must ensure that the vehicle is in safe operating condition. The driver should review the last driver's vehicle inspection report for that vehicle and, if necessary, take steps to correct any deficiencies as defined in the regulation.
- B. FMCSR § 396.11 Driver Vehicle Inspection Report requires every commercial motor vehicle to be inspected daily. Motor carrier shall require its drivers to submit a written report on each vehicle operated that day. In their reports, drivers must address specific parts and accessories, such as brakes, steering and lights. Each commercial motor vehicle in the fleet should carry a Driver Vehicle Inspection Report book where the drivers can record and submit this information. The vehicle must be inspected prior to being operated. This does require that the power unit and trailer be inspected. A driver must be satisfied that both the power unit and trailer are in safe operating condition before operating the combination. A pre and post trip inspection should cover at least the following parts and components on the vehicle:
- Service brakes, including trailer brake connections
  - Parking brake
  - Steering mechanism
  - Lighting devices and reflectors
  - Tires
  - Horn
  - Windshield wipers
  - Rearview mirrors
  - Coupling devices
  - Wheels and rims
  - Emergency equipment

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**

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- C. Any findings noted on the inspection report that do not meet the minimum standards established in the regulation should be repaired prior to placing the vehicle in service. All maintenance and repairs should be documented and maintained in files at the operating location. At the end of the shift, the driver shall perform a post-trip inspection.

**1.10 MAINTENANCE OF TEMPORARY ENVIRONMENTAL CONTROLS**

- A. The implementation, maintenance, replacement and upgrading of temporary environmental controls shall be the responsibility of the Contractor until Final Completion.
  - 1. During the Contract Time, temporary environmental controls installed by the Contractor may require maintenance, relocation or upgrading. This Work shall be performed by the Contractor as needed and/or directed by the City.
  - 2. Contractor shall pay for all costs associated with the construction, maintenance, upgrading and removal of temporary environmental controls throughout the Contract Time.
- B. Contractor shall monitor and maintain temporary environmental controls and BMPs throughout the Contract Time of the Project. This includes but is not limited to:
  - 1. Replace or update temporary environmental controls and BMPs that are not observed to be functional by the Contractor, City or Engineer.
  - 2. Remove accumulations of sediment when more than 50 percent of silt storage capacity is filled for a TESC BMP.

**1.11 SITE MAINTENANCE**

- A. The Contractor shall keep the Project Site and Contractor's facilities clean and free from excess dirt, rubbish, and debris at all times. Materials and equipment shall be removed from the site when they are no longer necessary. Upon completion of the Contract Work and before final acceptance, the Project Site shall be cleared of equipment, unused materials, and dirt and rubbish to present a clean and neat appearance in conformance with the present condition of the Project Site.
- B. Waste material of any kind shall not be permitted to accumulate, remain at the Project Site, or on the adjacent street areas.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 00 – TEMPORARY ENVIRONMENTAL CONTROLS AND MONITORING**

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- C. If waste material, refuse, debris or rubbish is not removed from the Project Site, or on adjacent streets by the Contractor, the City reserves the right to have such material removed and the expense of the removal and disposal charged to the Contractor deducted from the pay application for the month this occurs.

**PART 2 – PRODUCTS**

**2.01 MATERIALS**

- A. Refer to Contract Drawings for requirements for the types of products and materials to be used for temporary environmental controls.

**PART 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT**

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**SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT**  
**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Contractor shall conduct cleaning and waste disposal operations in full compliance with federal, state, and local laws, regulations, and environmental and anti-pollution regulations.
- B. The City will provide a container for use by the Contractor for disposing of materials from the project work. The Contractor shall coordinate with the City at the start of the Project Work. The concrete rubble from removal of the West Concrete Pad can be hauled to an on-site location for future disposal by the City. Contractor to coordinate with the City for container and on-site disposal.
- C. Burying of debris, rubbish or other waste material generated from the Project Site is not permitted.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION**

**3.01 COLLECTION AND DISPOSAL OF WASTE**

- A. Collect waste from the Work Area of the Project Site daily. Do not hold waste materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.
- B. All dumpsters or other waste containers are to be maintained within the Project area, shall be covered and shall not be open.

**3.02 FINAL CLEANING**

- A. Before Final Completion, final cleaning of the Project Site shall be performed by the Contractor. Contractor shall leave the Project Site, and all adjacent City rights-of-way free of any associated waste or debris from the project and returned to the pre-construction condition satisfactory to the City.
  - 1. Clean the Project Site disturbed by construction activities. Sweep any paved areas broom clean. Unpaved areas shall be re-graded, if necessary, and restored to pre-existing conditions or better.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT**

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2. Remove tools, construction equipment, machinery, and surplus material from the Project Site.
- B. If Contractor fails to clean up the Project Site to the satisfaction of the City, after reasonable notice is provided by the City, the City may do so, and the costs incurred by the City shall be charged to Contractor on the final payment.

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 77 00 – CLOSEOUT PROCEDURES**

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**SECTION 01 77 00 – CLOSEOUT PROCEDURES**  
**PART 1 – GENERAL**

**1.01 DESCRIPTION**

- A. Contractor shall refer to SECTION 00 72 00 – GENERAL CONDITIONS and SECTION 00 73 00 – SUPPLEMENTAL CONDITIONS as modified by the City of Tacoma for the definition, guidance and requirements for Substantial Completion, Final Completion, and Final Acceptance.
- B. These requirements include, but are not limited to, Contractor's notification requirements to the City, specified inspections, and submittal of Project Record documents.

**1.02 SUBSTANTIAL COMPLETION DEFINITION FOR THIS PROJECT**

- A. Substantial Completion shall include, but not be limited to, the following:
  - 1. All excavation and material placement work being completed.
  - 2. All aboveground and underground utilities restoration being completed (if applicable).
  - 3. All staging area, access corridor and construction entrance dismantling, and restoration being completed.

**1.03 SUBSTANTIAL COMPLETION INSPECTION**

- A. Contractor shall give the City a minimum of three (3) days' notice to request a Substantial Completion inspection.
- B. On receipt of a request for an inspection for Substantial Completion by the City, the City and Engineer shall proceed with the inspection with the Contractor. This inspection shall include the development of a punch list of items that require the Contractor's attention and correction to achieve Substantial Completion and/or work remaining to be accomplished for the Contractor to achieve Final Completion of the Project.
  - 1. The City may add additional items to the punch list at any time between Substantial Completion and Final Completion.
- C. If the Project is not deemed Substantially Complete, the City shall conduct a repeat inspection when requested by the Contractor, provided the Contractor assures the City that the Work has been Substantially Completed.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 77 00 – CLOSEOUT PROCEDURES**

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1. The City will issue a written notice of Substantial Completion following this inspection or shall advise Contractor of Work that must be corrected or completed before the notice will be issued.
- D. Results of the completed Substantial Completion inspection shall form the basis of identifying any outstanding requirements for achieving Final Completion.

**1.04 FINAL COMPLETION INSPECTION**

- A. Upon completion of all punch list items identified during the Substantial Completion inspection and the completion of all remaining Work items identified by the City or Contractor, Contractor and the City with the Engineer shall together perform an inspection to verify that Contract requirements, including corrective actions on punch list items, have been completed.
- B. Contractor shall provide the City a minimum of ten (10) days' notice to request a Final Completion inspection.
- C. On verification that all project work has been completed, and upon receipt of the completed Project Record file, the City shall issue a Notice of Final Completion to the Contractor.

**1.05 FINAL ACCEPTANCE**

- A. The City shall issue the Notice of Final Acceptance when all Contract requirements have been satisfied.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 78 39 – PROJECT RECORD DOCUMENTS**

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**SECTION 01 78 39 – PROJECT RECORD DOCUMENTS**  
**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Throughout progress of the Work, the Contractor shall maintain an accurate record of all Project Record Documents and Red-line Drawings.

**1.02 QUALITY ASSURANCE**

- A. General: The Contractor has full responsibility for maintenance of changes to the Project Record Documents.
- B. Accuracy of Records: Thoroughly coordinate all changes to the Contract Drawings by making red-line entries on an ongoing basis on a single set of drawings maintained at the job site. Accuracy shall be such that future uses of information showing the as-built condition of the Contract Work may reasonably rely on the information shown. The City's approval of the accuracy and status of the record of changes to the Redlines will be a prerequisite to the City's approval of requests for each progress payment. Appropriate payment may be withheld if Redlines are not up to date at the times of periodic applications for progress payments.

**1.03 PROJECT RECORDS**

- A. Contractor shall maintain Project Records including all submittals, change orders, RFIs, import facility weigh tickets or receipts, warranties, daily and weekly monitoring forms and/or reports, permits/substantive requirements, etc. in their files.
- B. Contractor shall submit the Project Records to the City as per the requirements of the Contract Documents. Project Records files shall be submitted to the City electronically using e-Builder (construction management software).

**1.04 RED-LINE DRAWING REQUIREMENTS**

- A. General: Preparation of Red-Line Drawings is a requirement of the Contract. The Contractor is required to revise the Contract Drawings to document the changes during construction to produce an as-built record of the project.
- B. Red-Line Drawings:
  - 1. General: The Contractor shall revise one set of Contract Drawings by redline process to show the as-built conditions during the Project. These working, Red-Line Drawings shall be kept accurate and current throughout the progress of the Work.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 78 39 – PROJECT RECORD DOCUMENTS**

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2. Progress Submittals: Prior to submitting each request for progress payment, secure the City's approval of the working Red-Line Drawing as currently maintained.
3. Final Red-Line Drawings Submittal: After approval of the current "Red line" Drawings by the City, and within 14 days after Substantial Completion, and prior to Final Payment request, submit (one copy) of the final Red-Line Drawings to the City.

**1.05 HANDLING OF RED-LINE DRAWINGS**

- A. During execution of the Work, the Contractor shall use all means necessary to maintain a record of changes to the Contract drawings completely protected from deterioration and from loss and damage. Such changes shall be recorded upon the Red-Line Drawings which will be composed of Contractor markups on project drawing prints supplied by the City.

**1.06 MAINTENANCE OF RED-LINE DRAWINGS**

- A. Identification: Upon receipt of the project drawings described in paragraph 2.01 above, identify each of the Documents with the title "RED-LINE".
- B. Preservation: In consideration of the Contract completion time, frequent use of the Red-Line Drawings for making new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the project Red-Line Drawings to the approval of the City.
- C. Do not use the Red-Line Drawings for any purpose except entry of new data and for review by the City.
- D. Making Entries to the Red-Lines Drawings:
  1. Using an erasable, red-colored pencil or pen, clearly describe the change by notes and by graphic line. It is not necessary for the Contractor to redraw what is clearly shown and dimensioned on a sketch presenting the change that is prepared by the City however, the sketch should be included on the sheet or attached to the back of the preceding sheet.
  2. Clearly indicate which information a sketch replaces, by "cloud" or similar notation.
  3. Distinguish to the satisfaction of the City between annotations intended to be copied exactly by a future drafter creating Record

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 78 39 – PROJECT RECORD DOCUMENTS**

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Drawing files, and information that is supplemental and not meant to be copied. Examples of supplemental information would include notes to the drafter and information purely for the Contractor's information in monitoring the change. A suggested approach is to make all markings not to be copied by the future drafter in a color other than red, reserving red for information to be copied exactly.

4. The working and final Red-Line Drawings shall show, at a minimum, the following information:
  - a. All changes in the work generated by documents such as Change Orders, Requests for Information (RFI) and Contractor-originated proposals. Identify the documents generating changes from the as-bid Contract Documents. These changes shall show the actual work with the same level of accuracy and completeness as the original Contract documents.
  - b. Any sketches that accompanied the Change Order/Directive attached to the drawing sheet or the back of the sheet preceding it.
  - c. The actual location, identification and sizes of material, equipment, utilities and elements of the project to the same level of detail as the original as-bid Contract Drawings.
  - d. The correct scale, grade, elevations, dimensions and coordinates of changes.
  - e. Changes or modifications that result from final inspection.

**1.07 SUBMITTALS**

- A. Progress and Final Red-Line Drawings as discussed herein.

**PART 2 – PRODUCTS**

**2.01 PROJECT DRAWINGS**

- A. Promptly following award of the Contract, secure from the City one full size set of paper prints of the Contract Drawings for recording as-built conditions.

**PART 3 – EXECUTION (NOT USED)**

**END OF SECTION**

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 22 00 – EXISTING CONDITIONS ASSESSMENT**

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**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Prior to commencing earth disturbing or material placement activities, the Contractor shall perform all necessary existing conditions assessments at the Project Site to facilitate and permit the Contractor to return and restore the Project Site to match or exceed its original condition or conditions as specified in the Contract Documents. Limits of existing conditions assessment shall extend, at a minimum, 50 feet beyond the Project Site.
- B. Existing conditions assessments shall include, but are not limited to:
  - 1. Photographic and/or video documentation of surface and above ground features including but not limited to asphalt and concrete paved surfaces, tarmac surfaces, existing fencing, existing irrigation, existing log rail, existing habitat areas, trees, plants and bushes, and above ground utilities, at the Project Site before commencing construction.
  - 2. Photographic and/or video documentation of the locations and conditions of underground utilities (if applicable).

**1.02 SUBMITTALS**

- A. Photographs, video documentation and notes of existing site conditions assessments for all surface, above ground features and utilities and underground features and utilities (if applicable) at least one week prior to commencing clearing, grubbing, excavation, or material placement activities at the Project Site.

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION**

**3.01 UTILITY LOCATION**

- A. Contractor shall locate all existing utilities so as to avoid damage or disturbance. The Work is on private property, so a private utility company must be called by the Contractor to locate both conductible and non-conductible utilities.
- B. Contractor is responsible for avoiding damage to all utilities.
- C. Contractor shall notify the City promptly if underground utilities not shown in the Contract Documents are identified through the Contractor's location efforts or are encountered.

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 22 00 – EXISTING CONDITIONS ASSESSMENT**

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**3.02 SITE FEATURES AND STRUCTURES INVENTORY**

- A. Contractor shall include in Contractor's existing conditions assessment and documentation of the Project Site an inventory of all site features, buildings, and structures.
- B. The inventory of site features and structures shall include locations and, as applicable, alignment and orientation information, to reinstall or replace (if necessary) site features and structures to their pre-construction locations and configurations.
- C. If uncertainty exists about Contractor's ability to preserve site features and structures specified to remain or remove/reinstall in the Project Documents, Contractor shall notify the City promptly. Such notification shall not remove responsibility from Contractor to perform Work as specified in the Contract Documents, unless otherwise authorized by the City.

**3.03 UNFORESEEN PHYSICAL CONDITIONS**

- A. If Contractor encounters conditions at the Project Site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to the City promptly before conditions are disturbed and in no event later than one (1) calendar day after the first observance of the conditions.

**END OF SECTION**

**SECTION 31 05 13**  
**EARTHWORK FOR LANDFILL CAP REPAIR**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. This Section specifies general earthwork requirements for the project, including material handling, excavation backfilling and fill compacting, and other work incidental to the earthwork shown on the Drawings or required to accomplish the work under this Contract. Earthwork covered under this section includes, but is not limited to, the following elements:
1. Excavating the existing cover soils (topsoil, cover material, sand layer) from above the geosynthetic landfill cap materials, and stockpiling soils for disposal.
  2. Cutting out and disposing geosynthetics and rolling back undamaged geosynthetics to expose the underlying soil bedding.
  3. Placing and grading imported sand layer to match the existing bottom geomembrane elevation.
  4. Placing imported cover soils over the repaired geosynthetics.
  5. Hydroseeding restored landfill cap.
  6. Handling and disposal of waste material, including excavated cover soils and sand layers and other solid waste debris such as geosynthetic materials and batten strips.

**1.02 RELATED DOCUMENTS**

- A. General Provisions of the Contract, including Part II General Conditions for Washington State Facility Construction and Part III Supplemental Conditions as Modified by the City of Tacoma, and other Division 01 Specification Sections apply to this Section.
- B. Section 02 41 00 – Demolition
- C. Section 31 05 19.13 – Geotextiles
- D. Section 31 05 19.16 – Geomembrane
- E. Section 31 05 19.29 – Geonets

**1.03 CODES AND REFERENCES**

- A. Applicable provisions of the following standards shall apply to the work of this Section, except as modified herein, and are hereby made part of these Contract Specifications to the extent required:

1. 29 CFR 1910 - Occupational Safety and Health Regulations.
  2. WAC 296-155, Safety Standards for Construction Work, including Part N, Excavations, Trenches, and Shoring.
  3. 29 CFR 1926 - Safety and Health Regulations for Construction.
- B. The following standards and test methods are included as a part of this section insofar as specified and modified herein. In case of conflict between the requirements of this Section and the listed standards and test methods, the requirements of this section shall prevail.

Reference	Title or Description
ASTM D422	Test Method for Particle-Size Analysis of Soils
ASTM D1557	Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft <sup>3</sup> (2,700 kN-m/m <sup>3</sup> ))

#### 1.04 SUBMITTALS

- A. As part of Contractor's construction plan, prepare and submit a detailed description of the planned sequencing, methods, and equipment to accomplish the work under this section.
- B. Submit a list of proposed material suppliers, referencing the materials or supplies to be provided and used in the work, and the address from where the material is originating.
- C. Submit a minimum of 7 days prior to importing any granular fill material to the site:
  1. Certification of gradation and material compliance with the Specifications, along with copies of associated laboratory test results.
  2. Material gradation and moisture-density compaction curve reports as appropriate for each type and source of imported fill material, including:
    - a. Sieve/grain size analyses per ASTM D 422
    - b. Laboratory-determined maximum dry density and optimum moisture content per ASTM D 1557.
  3. Samples of imported materials of sufficient volume for any laboratory tests requested by the City. Contractor shall assure the samples are representative of materials to be imported to the site.
  4. Certification that the imported fill materials were obtained from a commercial quarry or pit permitted by the State of Washington.

5. Whenever the source from which the imported fill materials are obtained is changed, certificates of compliance and the required laboratory test results from these new sources will also be required at no additional cost to the City.
- D. Upon completion of the work under this section, submit as-built documentation that includes a detailed summary of Contractor's earthwork activities, as-built drawings, materials certifications and QC measurements, and other documentation required by the Drawings and Specifications or otherwise requested by the City.

## **1.05 QUALITY ASSURANCE**

- A. The Construction Quality Assurance (CQA) program for landfill cap repairs is detailed in the document entitled *Construction Quality Assurance Manual, Landfill Gas Flare Station Pad Cap Repairs, City of Tacoma Landfill, Tacoma, Washington*, which is attached to these Specifications.

## **1.06 DISPOSAL OF SOLID WASTE**

### **A. General**

1. The Contractor is advised that the construction of this project is being performed within, over and adjacent to buried wastes and refuse. As these buried materials decompose anaerobically, they will generate landfill gas (LFG), which normally consists of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and occasionally hydrogen sulfide (H<sub>2</sub>S) and other gases, depending on the composition of the buried materials. These gases usually vent to the atmosphere through the cover soil when the geomembrane liner is removed or from broken or cut LFG piping, but may migrate laterally over 1,000 feet to adjacent areas depending on site and weather conditions.
2. The 240-acre landfill has been receiving municipal solid waste since the 1960s, and in 2012, received the final waste loads. The work will occur in areas where the landfill was capped in the 1990's.
3. All material encountered below the lowest geomembrane will be considered solid waste and potentially contaminated soil, including the 12-inch thick bedding soil layer above the solid waste. This material is not included in the scope of excavation and should remain in place.
4. The excavated material above the lowest geomembrane is not considered contaminated. This material should be disposed of in accordance with Section 01 74 00.

### **B. Notification**

1. The Contractor shall notify the City, in writing, at least ten (10) working days prior to the date that excavation operations are to begin and identify the limits of that excavation. Excavation shall not take place without a designated representative from the City on site.

### **C. Transportation**

1. The Contractor shall provide all equipment, personnel, and materials necessary to load, transport, and dispose waste materials.

D. Control of Waste Material

1. Vehicles used by the Contractor to transport waste materials shall be properly designed, equipped, and maintained to prevent the loss of materials during transport. The following requirements shall be met for all vehicles transporting waste materials from the site:
  - a. No soil or waste from the site shall adhere to the outside of the surface of the vehicle (including tires and undercarriage).
  - b. No liquids shall be leaking or dripping from the vehicles.
  - c. Any and all waste materials shall be covered with tarpaulin or otherwise completely enclosed to prevent loss of materials from the vehicle during transport.
2. If leaking or dripping from transport vehicles occurs, the City may direct the Contractor to use liners or other means to prevent dripping and leaking. The Contractor shall implement such measures, as directed by the City, at the Contractor's sole expense.

E. Street Sweeping

1. The Contractor shall sweep those streets using a Vacuum Sweeper within the project when truck traffic carries soil and waste from the site onto the site roadways.
2. Street sweeping shall be conducted in such a way as to not generate visible dust.
3. Material collected from street sweeping shall be disposed of in a legal manner at an off-site location.

## **1.07 WATER MANAGEMENT**

A. General

1. The Contractor is responsible for keeping excavations free from water during construction and disposing of the water in a manner that will not cause injury to public or private property, or to cause a nuisance to the public.
2. Water in contact with waste shall be considered leachate. .
3. The Contractor shall maintain dry working conditions at all times and under all conditions. Water flowing toward or into excavations shall be controlled to prevent sloughing of excavation walls, boils, uplift, and heave in the excavation, and to eliminate interference with orderly progress of construction.
4. Street washing with water shall not be permitted.

## **PART 2 - PRODUCTS**

### **2.01 SOIL BEDDING**

- A. The soil bedding layer to be installed to fill the excavation to grade and under the bottom geomembrane shall consist of granular material, free from wood, bark, or other extraneous material and shall meet the following requirements for grading:

Sieve Size	Percent Passing by Weight
2½ "	90-100
No. 4	24-100
No. 10	14-100
No. 50	0-30
No. 100	0-7.0
No. 200	0-3.0

### **2.02 SAND**

- A. Sand for landfill cap repair shall consist of granular material, free from wood, bark, or other extraneous material and shall meet the following requirements for grading:

Sieve Size	Percent Passing by Weight
2½ "	90-100
No. 4	24-100
No. 10	14-100
No. 50	0-30
No. 100	0-7.0
No. 200	0-3.0

### **2.03 COVER MATERIAL**

- A. Cover material shall consist of granular material, free from wood, bark, or other extraneous material and shall meet the following requirements for grading:

Sieve Size	Percent Passing by Weight
2½ "	90-100
No. 4	24-100
No. 10	14-100
No. 50	0-30
No. 100	0-7.0
No. 200	0-3.0

- B. Aggregate for Imported Liner Cover Layer soil shall consist of rounded (as defined by ASTM D 2488 paragraph 10.1) material, either naturally occurring or processed. It shall be free of deleterious material. Deleterious material includes wood, organic waste, coal, charcoal, and any other extraneous or objectionable material.

### **2.04 TOPSOIL**

- A. Imported topsoil shall consist of a 50%/50% mixture of pure compost and sand, sandy loam or silty sand. The soil shall be high in organic content and

compromised of fully composted and mature organic materials. Compost used on this project shall be Cascade Compost or approved equal. No fresh sawdust or other fresh wood by-products shall be added to extend the volume after the composting process. Chemical/physical characteristics shall comply with the following:

Screen Size (approx. Particle size)	7/16" maximum
Total Nitrogen	0.25% minimum
Organic Matter	10% minimum
pH Range	5.5-7.5
Conductivity	5 mmhos/cm maximum

Submit 1 cubic foot sample with supplier's certification of material.

## 2.05 HYDROSEEDING

A. The following seed mix shall be used for hydroseeding in landfill cap repair areas:

<b>Grass Mix</b>	
<b>Seed Kind</b>	<b>lbs/acre</b>
Perennial Rye (Choose 1)	56
Manhattan	
Pinnfine	
Derby	
Blazer	
Citation	
Chewings Fescue (Choose 1)	49
Highlight	
Koret	
Annual Rye	14
White Dutch Clover	21

B. All water to be used during seeding shall be free from oil, acid, alkali, salt, and other substances harmful to growth of seed and shall be from a source approved prior to use. The Contractor shall provide their own source of water.

## 2.06 FERTILIZER

A. Fertilizers must be delivered to job sites, mixed as specified, in standard size unopened containers, showing weight, analysis and name of manufacturer. Material shall be uniform in composition, free-flowing and suitable for application by mechanical equipment. All elements shall be protected from the weather, particularly moisture, both on and off the job site. If seed supplier does not provide a recommendation for fertilizer, fertilizer shall be SoundGRO Fertilizer 6-7-0 applied at 900 lbs/acre or equal.

## **2.07 EQUIPMENT**

- A. Provide all necessary equipment to accomplish the work in this section, including the excavation, transport, placement, moisture conditioning, backfilling, grading, and compaction of soil, and disposal of waste materials.
- B. Compaction equipment shall be properly sized and suitable to the type and location of material being compacted and shall be used in the manner needed to achieve the degree of compaction required.

## **PART 3 - EXECUTION**

### **3.01 PREPARATION**

- A. The Contractor shall mark out the excavation line and designate areas for soil stockpiling as shown on the Plans. Stockpile locations shall be approved by the City. At a minimum, the Contractor should be prepared to provide temporary plastic sheeting over the soil stockpiles and excavation areas for temporary erosion and sediment control (TESC).

### **3.02 COVER SOIL EXCAVATION**

- A. The Contractor shall use an excavator with a smooth-edge (no teeth) bucket or hand shovels to excavate the cover soil (average 18-inch thickness).
- B. Then, using hand tools, a vac-truck and air knife or hydro-excavation technique, remove the remaining soil to expose the underlying geosynthetic.
- C. Stockpiles and the excavation shall be covered with plastic sheeting as shown on the Plans if the soil is to remain undisturbed for more than 48 hours.
- D. Excavated cover soils shall be disposed of by the Contractor.

### **3.03 PRIMARY GEOSYNTHETIC LINER DEMOLITION**

- A. Once the underlying geosynthetic is exposed, cut out each geosynthetic layer to the limits shown on the Plans and fold back each layer to expose the underlying layer. Secure the folded back geosynthetics with sandbags (or Engineer approved equivalent) to keep these out of the way during construction. The waste geosynthetics shall be disposed of by the Contractor.

### **3.04 SAND EXCAVATION**

- A. Carefully excavate the sand layer (average 12-inch thickness) using a smooth-edge (no teeth) bucket excavator to within two inches of the underlying secondary geomembrane, and then manually remove the remainder of the sand using hand tools, a vac-truck and air knife or hydro-excavation technique to expose the underlying geomembrane to the minimum width necessary for construction access.
- B. Stockpile the sand layer adjacent to the work for backfilling.
- C. Excavated sand materials shall be disposed of by the Contractor.

### **3.05 SECONDARY GEOMEMBRANE DEMOLITION**

- A. Cut through the 60-mil thickness secondary geomembrane.
- B. Fold back the geomembrane to expose the underlying soil bedding layer.
- C. Secure the folded back geomembrane with sandbags (or Engineer approved equivalent) to keep the liner out of the way during construction.
- D. The waste geosynthetics shall be disposed by the Contractor.

### **3.06 REPLACING AND REPAIRING THE GEOSYNTHETICS**

- A. The sand and soil bedding beneath the bottom geomembrane shall be graded to match the surrounding layer elevation.
- B. Once the subgrade has been accepted by the CQA Monitor, the geosynthetic layer around the excavation edges shall be laid down flat and new geosynthetics shall be installed over the excavation area. The geosynthetic installation shall be performed by an experienced installer in accordance with Sections 31 05 19.13, 31 05 19.16, 31 05 19.29, and the Plans.

### **3.07 PLACING COVER MATERIAL ON THE GEOSYNTHETICS**

- A. Prior to placing any fill on the landfill cap, the Contractor shall prepare the areas to receive fill by completing the underlying geosynthetic repairs and all quality control testing for the geosynthetics (per Sections 31 05 19.13, 31 05 19.16, and 31 05 19.29).
- B. Tracked or rubber-tired equipment shall not be allowed directly on the exposed geosynthetics.
- C. Cover material and topsoil shall be replaced using imported material. The Contractor shall place the fill in loose lifts parallel to the prepared subgrade, and between 12 inches and 18 inches in thickness. The Contractor shall compact each layer by routing loaded haul equipment over its entire width. A minimum 12-inch thickness of soil must be maintained between all equipment tracks and the underlying geomembrane liner.

### **3.08 TOPSOIL PLACEMENT**

- A. Once the cover material placement has been approved by the Engineer, the Contractor shall place a 6-inch thickness of topsoil from off-site sources approved by the Engineer. The Contractor shall track-walk the top surface to topsoil with track directions running up and down the slope.

### **3.09 SEEDING**

- A. Once the topsoil placement has been approved by the Engineer, the Contractor shall seed the topsoil.

- B. All areas to be seeded shall meet the specified finish grades and shall be free of undesirable weed or plant growth and all clods, rocks, and debris 3 inches or larger in any dimension.
- C. Equipment in good condition shall be provided for the proper preparation of the ground and for handling and placing all materials.
- D. The areas shall be graded and all surfaces shall be left in an even and properly compacted condition to prevent formation of depressions. Finished grade shall be such that after seeding, the planted grade will join flush with adjoining surface grades.
- E. Should any portion of the sloped surfaces become gullied or otherwise damaged or treatment is destroyed, the affected portion shall be repaired to original condition and grade prior to injury. Repair work required because of faulty operations or negligence on the part of the Contractor shall be performed without cost to the City.
- F. All seeding operations shall occur as soon as grading operations are complete and it is an acceptable time of year for seeding.
- G. The Contractor shall notify the City not less than 24 hours in advance of any seeding operation, and he shall not begin the work until areas prepared or designated for seeding have been approved. Following the Engineer's approval, seeding of the approved slopes shall begin immediately.
- H. Seed shall be distributed uniformly over the designated area. Half of the seed shall be sown with the sower moving in one direction, and the remainder with the sower moving at right angles to the first sowing. When area to be seeded adjoins undisturbed vegetation, seeding shall overlap that vegetation by a minimum of 1 foot.
- I. The Contractor shall seed, fertilize, and mulch all grassy landfill cap areas disturbed by the Contractor's activities to restore the grassy cover.
- J. The Contractor shall be responsible for having thoroughly flushed out the hydroseeding tank to ensure that no undesirable seed types are mixed in with the specified mix given in these specifications. Should any undesired seed become established in the lawn, the Contractor shall be responsible for eradicating the unwanted plants prior to acceptance.
- K. The Contractor shall guarantee the hydroseeding for a period of 90 (ninety) days or until a healthy stand of vegetation is established, whichever comes first. The establishment period shall commence on the date of acceptance of the seeding, in place. All seeding which, in the opinion of the Engineer, is not in a healthy growing condition at the end of the establishment period shall be replaced or covered with plastic sheeting by the Contractor at his own expense. Seeding shall be replaced with the same mixture and grade as was originally placed.
- L. Seeding fertilizer shall be applied per seed supplier recommendation or BMP C120 per the July 2021 edition of the City of Tacoma Surface Water Management Manual., Volume 3, Section 1.7.

### **3.10 REPORTS AND RECORDS**

A. Prepare and have on file the following records and reports:

1. Daily progress reports.
2. Results of all construction monitoring, inspection, and quality control testing done to meet the requirements of this section.
3. Records, reports, and backup documentation as required by this section.
4. A record of unusual conditions of materials and construction problems encountered and disposition made, as well as a construction log indicating delays encountered during earthwork activities and stating the cause, location, and extent of the delay.

**END OF SECTION**

**SECTION 31 05 19.13  
GEOTEXTILES**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. This section specifies furnishing and installing geotextile used in landfill cap repairs around the Flare Station Pad and over the decommissioned West Concrete Pad.
- B. All work shall be in strict accordance with the Specifications, the CQA Manual, the Plans, and as directed by the Engineer. The Contractor shall provide a qualified geosynthetics installer to complete the work in this section, and the term "Contractor" in this Section may be inclusive of the geosynthetics installer.
- C. The Contractor shall provide all necessary equipment to accomplish the work in this Section, including loading and deployment equipment and man-power.

**1.02 RELATED DOCUMENTS**

- A. General Provisions of the Contract, including Part II General Conditions for Washington State Facility Construction and Part III Supplemental Conditions as Modified by the City of Tacoma, and other Division 01 Specification Sections apply to this Section.
- B. Section 31 05 13 – Earthwork for Landfill Cap Repair
- C. Section 31 05 19.16 – Geomembrane
- D. Section 31 05 19.29 – Geonets

**1.03 CODES AND REFERENCES**

- A. The following standards and test methods are included as a part of this section insofar as specified and modified herein. In case of conflict between the requirements of this Section and the listed standards and test methods, the requirements of this section shall prevail.
  - 1. ASTM D-885 — Methods for Testing Industrial Filament Yarns Made from Man-made Fibers.
  - 2. ASTM D-1777 — Method for Measuring Thickness of Textile Materials.
  - 3. ASTM D-3776 — Test Methods for Mass Per Unit Area (weight) of Woven Fabric.
  - 4. ASTM D-3786 — Test Method for Hydraulic Bursting Strength of Knitted Goods and Non-woven Fabrics.
  - 5. ASTM D-3787 — Test Method for Hydraulic Bursting Strength of Knitted Goods and Non-woven Fabrics, Diaphragm Bursting Strength Tester Method.

6. ASTM D-4491 — Test Methods for Water Permeability of Geotextiles by Permittivity.
7. ASTM D-4533 — Test Method for Trapezoid Tearing Strength of Geotextiles.
8. ASTM D-4595 — Test Method for Tensile Properties by the Wide-width Strip Method.
9. ASTM D-4632 — Test Method for Breaking Load and Elongation of Geotextiles (grab method).
10. ASTM D-4833 — Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.
11. ASTM D-4751 — Test Method for Determining Apparent Opening Size of a Geotextile.
12. ASTM D-4595 — Test Method for Tensile Properties by the Wide-width Strip Method.

#### **1.04 DEFINITIONS**

- A. Manufacturer: Responsible for the production of geotextile rolls.
- B. Installer: The party responsible for field handling, storing, deploying, repairing, anchoring, and any other aspects of installing the geotextile. The installer is also responsible for transportation of the material to the site.
- C. Construction Quality Assurance Consultant (CQAC): The party, independent from the Manufacturer or Installer, responsible for observing and documenting activities related to the quality assurance of the production and installation of the geomembrane. The CQAC person on site is referred to herein as the Engineer or the CQA Monitor. Also responsible for issuing a construction monitoring report and certification sealed by a Registered Professional Engineer in the State of Washington.

#### **1.05 SUBMITTALS**

- A. The Contractor will submit the following to the Engineer a minimum of two weeks before installation:
  1. Provide certification sheets from the geotextile manufacturer that the geotextile being sent to the project meet the product specifications outlined in this section.
- B. Submit, prior to delivery, manufacturer's certificates of compliance with specified product requirements.
- C. The Contractor will submit the following to the Engineer upon completion of installation:

1. Certificate stating the geotextile has been installed in accordance with the Contract Documents.
2. Material and installation warranties.

#### **1.06 QUALITY ASSURANCE**

- A. The Construction Quality Assurance (CQA) program for landfill cap repairs is detailed in the document entitled *Construction Quality Assurance Manual, Tacoma Landfill Flare Station Cap Repairs, City of Tacoma Landfill, Tacoma, Washington*, which is attached to these Specifications and incorporated in by reference and included in Appendix A.
  1. Field Quality Control will be conducted by the Contractor geosynthetic installer's quality control (QC) Tester. The Engineer will provide quality assurance as an independent verification of the Contractor's quality control procedures. The Manufacturer and Installer will participate in and conform to all terms and requirements of the Engineer's construction quality assurance (CQA) program. The Contractor is responsible for assuring this participation.

#### **1.07 STORAGE AND HANDLING**

- A. Protect geosynthetics from ultraviolet light exposure, precipitation, inundation, mud, dirt, dust, puncture, cutting, and other damaging or deleterious condition.
- B. Immediately restore damaged protective covering.
- C. Handling on Site:
  1. Use appropriate handling equipment to load, move, or deploy geomembrane rolls. Appropriate handling equipment includes cloth chokers and spreader bar for loading, spreader, and roll bars for deployment. Dragging panels on ground surface will not be permitted.
  2. Do not fold geomembrane material; folded material will be rejected.
  3. Installer is responsible for off-loading, storage, and transporting material from storage area to installation site.

#### **1.08 WARRANTY**

- A. Material shall be warranted, on a pro-rata basis, against defects for a period of 1 year from the date of the geotextile installation.
- B. Installation shall be warranted against defects in workmanship for a period of 1 year from the date of geotextile completion

### **PART 2 - PRODUCTS**

#### **2.01 FILTER FABRIC**

- A. Filter fabric shall be comprised of non-woven, continuous-filament needle punched polypropylene or polyester fabric; staple-filament needle punched yarn oriented into

a staple network that maintains its structure during handling, placement, and long-term service.

- B. Filter fabric shall be resistant to soil chemicals.
- C. Filter fabric shall be new product made from virgin materials.
- D. Filter fabric shall conform to the following minimum values unless otherwise approved:

Test	ASTM Test Designation	Unit	Minimum Requirement
Mass/Area	D-3776	oz/yd <sup>2</sup>	12
Grab Tensile Strength	D-4632	lbs.	180
Puncture Resistance	D-4833	lbs.	80
Trapezoidal Tear Strength	D-4533	lbs.	30
Mullen Burst	D-3786	Psi	290
UV Resistance (500 hours) <sup>a</sup>	D-4355		70% strength
<sup>a</sup> Manufacturer must provide certification letter. No additional MQC testing is required unless conformance testing is recommended by the CQA Organization.			

## 2.02 MANUFACTURER SOURCE QUALITY CONTROL

- A. The City will reject rolls for which Manufacturer quality control requirements are not met.
- B. Certify the quality of the rolls of geotextile.
- C. Provide quality control certificates for each lot and each shift's production. The quality control certificates must include:
  - 1. Roll numbers and identification.
  - 2. Sampling procedures.
  - 3. Results of quality control tests, including a description of test methods used.

## 2.03 LABELING

- A. Mark or tag geotextile rolls with the following information
  - 1. Manufacturer's name.
  - 2. Product identification.
  - 3. Lot number.
  - 4. Roll number.
  - 5. Roll dimensions.

6. Mark special handling requirements on rolls.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Prior to installation of geotextile, the Contractor shall examine underlying construction for conformance with specifications and verify the construction below the geotextile has been approved by the Engineer.

### **3.02 PROTECTION**

- A. When placing soil materials over geotextile, the Contractor shall ensure the following:
  1. No damage to geotextile.
  2. No slippage of geotextile on underlying layers.
  3. No excessive tensile stresses in the geotextile.

### **3.03 DEPLOYMENT**

- A. Follow manufacturer's recommendations, standards, and guidelines.
- B. Weight geotextile with sandbags or equivalent as ballast during deployment. Leave ballast in place until geotextile is covered with succeeding construction layer.
- C. Cut geotextile using hooked blade only, while being careful to protect other in-place geosynthetic materials when cutting geotextile.
- D. Do not entrap in geotextile excessive dust, stones, or moisture that could damage or clog drains or filters or hamper subsequent seaming.
- E. Examine geotextile over entire completed surface to ensure that no potentially harmful foreign objects, such as needles or sharps, are present. Remove any foreign objects.
- F. Do not drag geotextile across rough or textured surfaces to avoid damage to the geotextile. Use a smooth geosynthetic slip sheet or rub sheet as necessary to reduce friction damage during deployment.

### **3.04 SEAMS AND OVERLAP**

- A. Overlap geotextile roll a minimum of 3 inches and use heat bonding seam.

### **3.05 REPAIRS**

- A. Remove any soil or other material that may have penetrated the torn geotextile.

- B. Repair holes or tears in geotextiles with a patch from the same geotextile material, heat bonded in place with a minimum seam overlap of 12 inches in all directions. Heat bond the geotextile within one inch of the outside edge of the patch materials.

### **3.06 ACCEPTANCE**

- A. Contractor retains all ownership and responsibility for geosynthetics until acceptance by the City.
- B. The City accepts geosynthetics installation when:
  - 1. The installation is complete.
  - 2. The City has received all required Submittal documents from the Contractor, Installer, and Manufacturer.
  - 3. Verification of the adequacy of all seams and repairs, including associated testing, is complete.
  - 4. Written certification documents have been received by the City.

**END OF SECTION**

## **SECTION 31 05 19.16 GEOMEMBRANES**

### **PART 1 - GENERAL**

#### **1.01 SUMMARY**

- A. This section specifies furnishing and installing geomembranes to restore the primary and secondary liner systems around the Flare Station Pad and over the decommissioned West Concrete Pad.
- B. The geomembrane shall be smooth on both sides and 60-mil minimum thickness.
- C. All work shall be in strict accordance with the Specifications, the CQA Plan, the Plans, and as directed by the Engineer. The Contractor shall provide a qualified geosynthetics Installer to complete the work in this section, and the term "Contractor" in this Section may be inclusive of the geosynthetics Installer.
- D. The Contractor shall provide all necessary equipment to accomplish the work in this Section, including loading and deployment equipment and man-power as well as the welding and testing equipment as specified in this Section.

#### **1.02 RELATED DOCUMENTS**

- A. General Provisions of the Contract, including Part II General Conditions for Washington State Facility Construction and Part III Supplemental Conditions as Modified by the City of Tacoma, and other Division 01 Specification Sections apply to this Section.
- B. Section 31 05 13 – Earthwork for Landfill Cap Repair
- C. Section 31 05 19.13 – Geotextiles
- D. Section 31 05 19.29 – Geonets

#### **1.03 CODES AND REFERENCES**

- A. The following standards and test methods are included as a part of this section insofar as specified and modified herein. In case of conflict between the requirements of this Section and the listed standards and test methods, the requirements of this section shall prevail.
  - 1. ASTM D 1004 Test Method for Initial Tear Resistance of Plastic Film and Sheeting
  - 2. ASTM D 1238 Standard Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer
  - 3. ASTM D 1505 Test Method for Density of Plastics by the Density-Gradient Technique
  - 4. ASTM D 1603 Test Method for Carbon Black in Olefin Plastics

5. ASTM D 3895 Standard Test Method for Oxidative-Induction Time of Polyolefins by Differential Scanning Calorimetry
6. ASTM D 4218 Standard Test Method for Determination of Carbon Black in Polyethylene Compounds
7. ASTM D 4833 Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
8. ASTM D 5199 Standard Test Method for Measuring Nominal Thickness of Geotextiles and Geomembranes
9. ASTM D 5397 Standard Test Method for Evaluation of Stress Crack Resistance of Polyolefin Geomembranes Using Notched Constant Tensile Load Test
10. ASTM D 5596 Standard Test Method for Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics
11. ASTM D 5994 Standard Test Method for Measuring Core Thickness of Textured Geomembranes
12. ASTM D 6392 Standard Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods
13. ASTM D 6693 Standard Test Method for Determining Tensile Properties of Nonreinforced Polyethylene and Nonreinforced Flexible Polypropylene Geomembranes
14. ASTM D 7240 Standard Practice for Leak Location using Geomembranes with an Insulating Layer in Intimate Contact with a Conductive Layer via Electrical Capacitance Technique (Conductive Geomembrane Spark Test)
15. GRI GM 13 Test Properties, Testing Frequency and Recommended Warranty for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes.

#### **1.04 DEFINITIONS**

- A. Manufacturer: Responsible for the production of geomembrane rolls.
- B. Installer: The party responsible for field handling, storing, deploying, repairing, anchoring, and any other aspects of installing the geomembrane. The installer is also responsible for transportation of the material to the site.
- C. Construction Quality Assurance Consultant (CQAC): The party, independent from the Manufacturer or Installer, responsible for observing and documenting activities related to the quality assurance of the production and installation of the geomembrane. The CQAC person on site is referred to herein as the Engineer or the CQA Monitor. Also responsible for issuing a construction monitoring report and

certification sealed by a Registered Professional Engineer in the State of Washington.

- D. Lot - A quantity of resin (usually the capacity of one rail car) used in the manufacture of geomembranes. Finished roll will be identified by a roll number traceable to the resin lot used.
- E. Panel- Unit area of a geomembrane that will be seamed in the field that is larger than 100 ft<sup>2</sup>.
- F. Patch - Unit area of a geomembrane that will be seamed in the field that is less than 100 ft<sup>2</sup>.
- G. Subgrade Surface - Soil layer surface which immediately underlies the geosynthetic material(s).
- H. Bridging: The condition when geomembrane becomes suspended over its subgrade due to contraction of the material or poor installation.

#### **1.05 SUBMITTALS**

- A. The Contractor will submit the following to the Engineer a minimum of two weeks before installation:
  - 1. The Installer's Geosynthetic Field Installation Quality Assurance Plan – including equipment list and the qualifications of the personnel who will be performing seaming to the City two weeks prior to installation.
  - 2. Provide certification sheets from the geosynthetic manufacturer that the geosynthetics rolls being sent to the project meet the product specifications outlined this Section.
- B. The Contractor will submit the following to the Engineer upon completion of installation:
  - 1. Certificate stating the geomembrane has been installed in accordance with the Contract Documents.
  - 2. Material and installation warranties
  - 3. As-built drawings showing actual geomembrane placement, seams patches and repairs.
- C. The Installer shall furnish written evidence of the following qualifications to the City two weeks prior to installation:
  - 1. Name of Installer, and resume of installation supervisor/field personnel to be assigned to the project. Installer shall have successfully installed at least 25 million square feet of HDPE geomembrane prior to installing geomembrane for this project.

- a. Submit a list of at least 10 completed projects. For each installation, provide name, type, location of facility, facility contact and phone number, date of installation, description, type, and quantity of geosynthetic materials installed. The Installer's quality control program shall be submitted.
    - b. The supervisor for the geomembrane Installer (Master Seamer) shall have supervised the installation of at least 25 million square feet of HDPE geomembrane, which have been incorporated into environmental barrier layers, prior to installing geomembrane for this project.
    - c. A QC Tester shall be assigned to collect and test all samples. The QC Tester shall not be the Master Seamer. The QC Tester shall meet the same qualifications as the Master Seamer with the experience requirement reduced to 5 million square feet.
    - d. The geocomposite drainage layer shall be installed by the geosynthetic Installer under the direction of the Master Seamer.
  2. Name of Manufacturer, and documentation of the following minimum qualifications:
    - a. The geomembrane manufacturer shall have at least 5 continuous years' experience in the manufacture of high-density polyethylene (HDPE) geomembranes, and shall have manufactured a minimum of 25 million square feet of HDPE geomembrane prior to producing materials for this project.
- D. The Installer will submit the following to the City during installation:
1. Submit daily prior to the start of installation, subgrade acceptance certificate signed by the installation supervisor for each area to be covered by the geomembrane.
  2. Quality control documentation prepared during installation.
- E. The Installer will submit the following to the City upon completion of installation:
1. Certificate stating the geomembrane has been installed in accordance with the Contract Documents.
  2. Material and installation warranties
  3. As-built drawings showing actual geomembrane placement and seams.
- F. The Contractor shall provide manufacturer's warranty for geomembrane material in compliance with provisions of the Conditions of the Contract. Provide a minimum 20 year pro rata warranty for the material against deterioration due to exposure to the elements, either exposed or buried. The warranty for material must cover costs of material replacement and installation.

- G. The Contractor shall provide an installation warranty for geomembrane material in compliance with the conditions of the Contract. Provide a minimum of 1-year non-pro rata warranty for the installation against defects.

## **1.06 QUALITY ASSURANCE**

- A. The Construction Quality Assurance (CQA) program for landfill cap repairs is detailed in the document entitled *Construction Quality Assurance Manual, Tacoma Landfill Flare Station Cap Repairs, City of Tacoma Landfill, Tacoma, Washington*, which is attached to these Specifications.
- B. The City will engage and pay for the services of (1) Construction Quality Assurance Consultant (CQAC).

## **1.07 STORAGE AND HANDLING**

- A. Protect all geosynthetic rolls from ultraviolet light exposure, precipitation, inundation, mud, dirt, dust, puncture, cutting, and other damaging or deleterious condition.
- B. Immediately restore damaged protective covering on rolls.
- C. Handling on Site:
1. Use appropriate handling equipment to load, move, or deploy geomembrane rolls. Appropriate handling equipment includes cloth chokers and spreader bar for loading, spreader, and roll bars for deployment. Dragging panels on ground surface will not be permitted.
  2. Do not fold geomembrane material; folded material will be rejected.
  3. Installer is responsible for off-loading, storage, and transporting material from storage area to installation site.

## **PART 2 - PRODUCTS**

### **2.01 RESIN**

- A. Resin shall be new, first quality, compounded and manufactured specifically for producing geomembrane.
- B. Natural resin (without carbon black) shall meet the following requirements:

<b>Property</b>	<b>Test Method</b>	<b>HDPE</b>
Density (g/cm <sup>3</sup> )	ASTM D 1505	≥0.932
Melt Flow Index (g/10 min)	ASTM D 1238 (190/2.16)	≤1.0
OIT (minutes)	ASTM D 3895 (1 atm/200°C)	≥100

## **2.02 GEOMEMBRANE**

- A. The geomembrane rolls shall be seamless, HDPE containing no plasticizers fillers or extenders.
- B. Geomembrane shall not exceed a combined maximum total of 1 percent by weight of additives other than carbon black.
- C. Geomembrane shall be free of holes, pinholes as verified by on-line electrical detection, bubbles, blisters, excessive contamination by foreign matter, and nicks and cuts on roll edges.
- D. Geomembrane material is to be supplied in roll form. Each roll is to be identified with labels indicating roll number, thickness, length, width and Manufacturer.
- E. All liner sheets produced at the factory shall be inspected prior to shipment for compliance with the physical property requirements listed in this section and be tested by an acceptable method of inspecting for pinholes. If pinholes are located, identified and indicated during manufacturing, these pinholes may be corrected during installation.
- F. The sheet shall be extruded so as to produce a uniform sheet free of defects such as holes, tears, punctures blisters, or other manufacturing defects that may affect its durability. Minimum manufactured sheet width shall be 20 feet. Factory seams will not be permitted. The sheet shall be manufactured and fabricated within the United States.
- G. Rolls shall be labeled such that it is possible to relate each roll with manufacturing quality control documentation and raw material documentation.
- H. The Geomembrane liner shall meet the following requirements:

<b>Physical Property</b>	<b>Test Method</b>	<b>Minimum Average Roll Value Requirements</b>	<b>Testing Frequency (min)</b>
Thickness (min. avg), mils	ASTM D 5199	60	Per roll
Density (min.), g/cc	ASTM D792, Method B	0.940	200,000 lb
Tensile Properties <sup>1</sup> (min. avg.)	ASTM D 6693 Type IV		20,000 lb
Yield Strength, lb/in		126	
Break Strength, lb/in		228	
Yield Elongation, %		12	
Break Elongation, %		700	
Tear Resistance (min. avg.), lb	ASTM D 1004	42	45,000 lb
Puncture Resistance (min. avg.), lb	ASTM D 4833	108	45,000 lb
Stress Crack Resistance <sup>2</sup> , hr	ASTM D 5397 (App.)	300	per GRI-GM10
Carbon Black Content (range), %	ASTM D 1603 <sup>3</sup>	2.0-3.0	20,000 lb
Carbon Black Dispersion	ASTM D 5596	9 in Categories 1 or 2 and 1 in Category 3	45,000 lb
Oxidative Induction Time <sup>4</sup> (OIT) (min. avg.), minutes			200,000 lb
Standard OIT <b>OR</b>	ASTM D 3895	100	
High Pressure OIT	ASTM D 5885	400	
Oven Aging at 85°C <sup>4,5</sup> (OIT) (min. avg.), % retained after 90 days	ASTM D 5721		per each formulation
Standard OIT <b>OR</b>	ASTM D 3895	55	
High Pressure OIT	ASTM D 5885	80	
UV Resistance <sup>6</sup> (min. avg.), % retained after 1600 hrs	GRI GM 11		per each formulation
Standard OIT <b>OR</b>	ASTM D 3895	N.R. <sup>7</sup>	
High Pressure OIT <sup>8</sup>	ASTM D 5885	50	

<sup>1</sup> Machine direction (MD) and cross machine direction (XMD) average values should be on the basis of 5 test specimens each direction. Yield elongation is calculated using a gage length of 1.3 inches. Break elongation is calculated using a gage length of 2.0 in.

<sup>2</sup> The yield stress used to calculate the applied load for the SP-NCTL test should be the manufacturer's mean value via MQC testing.

<sup>3</sup> Other methods such as ASTM D 4218 (muffle furnace) or microwave methods are acceptable if an appropriate correlation to ASTM D 1603 (tube furnace) can be established.

<sup>4</sup> The manufacturer has the option to select either one of the OIT methods listed to evaluate the antioxidant content in the geomembrane.

<sup>5</sup> It is also recommended to evaluate samples at 30 and 60 days to compare with the 90 day response.

<sup>6</sup> The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C.

<sup>7</sup> Not recommended since the temperature of the Std-OIT test produces an unrealistic result for some of the antioxidants in the UV exposed samples.

<sup>8</sup> UV resistance is based on percent retained value regardless of the original HP-OIT value.

<sup>9</sup> Table adapted from GRI Test Method GM13, "Test Properties, Testing Frequency and Recommended Warranty for High Density Polyethylene (HDPE) and Textured Geomembranes", Geosynthetic Research Institute, June 1, 2009.

- I. Samples 21 by 30 centimeters or larger shall be excised from the sheet edge at random intervals during production, and at least one sample per roll shall be stored

with appropriate labeling. At least one sample shall be subjected to testing such as tensile strength, environmental stress crack resistance (ESCR), and shrinkage by the sheet manufacturer. The test results must fall in exactly determined tolerance ranges. The values shall be documented for each individual sample, stored with the respective sheet report and production report, and made available to the Engineer on request. The completed labeled sheet roll shall not be placed in storage if any of its test values deviate from the limits.

- J. It is the manufacturer's express obligation to exclude any sheet not complying with these quality standards. A sheet report showing the entire sheet roll shall be prepared on which any visible faults must be accurately entered. A stress cracking durability of range of tolerance greater than or equal to 1,500 hours must be documented in this testing. If negative results are obtained, the test shall be repeated on another sample from the sheet roll in question. If these results corroborate a substandard tensile-cracking durability, the manufacturer is obligated to exclude the roll from use.

### **2.03 EXTRUDATE ROD OR BEAD**

- A. Extrudate material shall be made from same type resin as the geomembrane.
- B. Additives shall be thoroughly dispersed.
- C. Materials shall be free of contamination by moisture or foreign matter.

### **2.04 MANUFACTURER SOURCE QUALITY CONTROL**

- A. Perform quality control tests listed above, at a minimum, once every one hundred thousand (100,000) square feet to evaluate manufacturer's published material characteristics.
- B. City will reject rolls for which quality control requirements are not met.
- C. Certify the quality of the rolls of geomembrane.
- D. Provide quality control certificates for each lot and each shift's production. The quality control certificates must include:
  - 1. Roll numbers and identification.
  - 2. Sampling procedures.
  - 3. Results of quality control tests, including a description of test methods used.

### **2.05 LABELING**

- A. Mark or tag geocomposite rolls with the following information:
  - 1. Manufacturer's name.
  - 2. Product identification.

3. Lot number.
4. Roll number.
5. Roll dimensions and sheet thickness.
6. Mark special handling requirements on rolls.

## **2.06 WELDING EQUIPMENT**

- A. Welding equipment and accessories shall meet the following requirements:
1. Gauges showing temperatures in apparatus such as extrusion welder or fusion welder shall be present.
  2. An adequate number of welding equipment shall be available to avoid delaying work.
  3. Extrusion welder: equipped with gauges showing temperatures in extruder apparatus and at nozzle. Temperature at nozzle may be measured by external temperature gauges.
  4. Hot wedge welder: Automated variable speed vehicular mounted devices equipped with devices adjusting and giving temperatures at wedge. Pressure controlled by spring, pneumatic, or other system that allows for variation in sheet thickness. Rigid frame fixed position equipment is not acceptable.
  5. Power source must be capable of providing constant voltage under combined line load.
  6. Provide protective lining and splash pad large enough to catch spilled fuel under electric generator, if located on liner.
  7. Tensiometers capable of measuring seam strength, calibrated and accurate within 2 pounds.
  8. Dies for cutting seam samples.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION OF SURFACE BELOW GEOMEMBRANE**

- A. Verify the underlying construction has been accepted by the Engineer.
- B. Verify in writing to the City that the surface on which the geomembrane will be installed is acceptable. Installation without written acceptance means acceptance.

### **3.02 PREPARATION**

- A. Round corners of trenches and grade changes to min. 6 inch radius or cushion with geotextiles.

- B. Repair damage caused to subgrade during deployment.

### **3.03 TRIAL WELDS**

- A. Perform trial welds on samples of geomembrane to verify the performance of welding equipment, seaming methods, and conditions.
- B. No seaming equipment or welder will be allowed to perform production welds until equipment and welders have successfully completed trial weld.
- C. Frequency of trial welds:
  - 1. Minimum of two trial welds per day with one prior to the start of work and one at mid shift.
  - 2. When directed by the Engineer
  - 3. Every two hours when using a wedge weld to weld across seams.
  - 4. Minimum one trial weld per person per shift
  - 5. When ambient temperature changes more than 20°F since previous trial weld
- D. Make trial welds in the same surroundings and environmental conditions as the production welds.
- E. Make trial weld sample at least 6 feet long for double wedge welding machines and 3 feet long for extrusion welds.
- F. Allow welds to cool and then cut excess material from the ends of the welds.
- G. Using a cutting die cut four 1-inch specimens, spaced evenly along the length of the weld.
- H. Using a field tensiometer, test specimens for peel adhesion, and bonded seam strength (ASTM D 4437). Alternate the specimens peel, shear, peel, and shear. Test both sides of the weld for shear strength. Test at a separation rate of two inches per minute.
- I. A single or double wedge weld specimen is considered passing when the following results are achieved. For double-wedge welding, both welds must pass in peel and shear.
  - 1. The break is a film-tearing bond (FTB).
  - 2. The break is ductile.
  - 3. The peel strength is a minimum of 70 percent of the specified sheet strength at yield for wedge welds or flat welds and a minimum of 60 percent of the specified sheet strength at yield for extrusion welds.

- 4. There is no more than 10 percent separation of the weld. For wedge welds the width of the weld must be equal to the width of the nip roller.
- 5. The shear strength is 90 percent of the specified sheet strength at yield for all weld types. When testing set grips back 1 inch from the edge of the weld. Minimum elongation between the grips must be 2 inches.
- J. The shear strength is 90 percent of the specified sheet strength at yield for all weld types. When testing set grips back a minimum of 1 inch from the edge of the weld. Minimum elongation between the grips must be 2 inches.
- K. Repeat the trial weld in its entirety when any of the trial weld samples fail in either peel or shear.
- L. When repeated trial weld fails, do not use welding apparatus and welder until deficiencies or conditions are corrected and two consecutive successful trial welds are achieved.

### **3.04 DEPLOYMENT**

- A. Give careful consideration to the timing and temperature during deployment. The CQAC will focus on verifying that (a) there is no bridging or stresses in the geomembrane and (b) there are no wrinkles in the geomembrane that will fold over when covering with soil material. Ideally, deployment, welding, and covering would all occur at the same temperature. In a practical sense the Contractor should strive to perform these activities within as narrow a temperature range as practical, and avoid these activities during peak hot or cold conditions.
- B. Deploy no more panels in one shift than can be welded or secured during that same day.
- C. Do not deploy in the presence of excessive moisture, precipitation, ponded water, or high winds.
- D. Do not damage geomembrane by handling, by trafficking, or leakage of hydrocarbons or any other means.
- E. Do not wear damaging shoes or engage in activities that could damage the geomembrane.
- F. No smoking shall be allowed of any workers on the site.
- G. Unroll geomembrane panels using methods that will not damage, stretch or crimp geomembrane. Protect underlying surface from damage.
- H. Use methods that minimize wrinkles and differential wrinkles between adjacent panels.
- I. Remove wrinkled or folded material.

- J. Place temporary sandbags on geomembrane that prevents uplift from wind. Use sandbags that will not damage geomembrane.
- K. Protect geomembrane in area of heavy traffic by placing protective cover that is compatible with and will not damage geomembrane.
- L. Do not allow any vehicular traffic directly on geomembrane.
- M. Visually inspect geomembrane for imperfections. Mark faulty or suspect areas for repair.
- N. Install material to account for shrinkage and contraction while avoiding wrinkles. Install material stress-free with no bridging before it is covered. Add material as needed to avoid bridging.
- O. Before wrinkles fold over, attempt to push them out. For wrinkles that cannot be pushed out, cut them out and repair cuts prior to burial or at the direction of the Engineer.

### **3.05 GENERAL WELDING PROCEDURES**

- A. Do not commence welding with welding equipment until trial weld test sample, made by that equipment, passes test.
- B. Clean surface of grease, moisture, dust, dirt, debris, or other foreign material.
- C. Overlap panels a minimum 3 inches for extrusion and 4 inches for hot wedge welding.
- D. Do not use solvents or adhesives.
- E. Provide adequate material on weld to allow peel testing of both sides of double wedge weld.
- F. Extend welding to the outside edge of all panels.
- G. If required, provide a firm substratum by using a flat board, a conveyor belt, or similar hard surface directly under the weld overlap to achieve firm support.
- H. Provide adequate illuminations if welding operations are carried out at night.
- I. Cut fish mouths or wrinkles along the ridge of the wrinkle in order to achieve a flap overlap. Extrusion weld the cut fish mouths or wrinkles where the overlap is more than 3 inches. When there is less than 3 inches overlap, patch with an oval or round patch extending a minimum of 6 inches beyond the cut in all directions.

### **3.06 INSTALLATION QUALITY CONTROL**

- A. Log the following every two hours
  - 1. Temperature directly on the geomembrane surface being welded.

2. Extrudate temperatures in barrel and at nozzle (extrusion welder).
  3. Operating temperature of hot wedge (hot wedge welder) and any pressure adjustments made.
  4. Preheat temperature.
  5. Speed of hot wedge welder in feet per minute.
- B. Weld only when ambient temperature, measured 6 inches above the geomembrane is between 40°F and 104°F.
- C. If the Installer wishes to use methods which may allow seaming at ambient temperatures below 40°F (5°C) or above 104°F (40°C), then the Installer shall demonstrate and certify that such methods produce seams which are entirely equivalent to seams produced at ambient temperatures above 40°F (5°C) and below 104°F (40°C), and that the overall quality of the geomembrane is not adversely affected. In addition, a change order to the contract between the City and the Installer, at no cost to the City, is required which specifically states that the seaming procedure does not cause any physical or chemical modification to the geomembrane that will generate any short or long term damage to the geomembrane. Then, the temperatures in the above quality assurance procedure shall be modified accordingly.
- D. Seaming below temperatures of 32°F must include preheating methods approved by the Engineer.

### **3.07 DEFECTS AND REPAIRS**

- A. Examine all welds and non-weld areas of the geomembrane for defects, holes, blister, undispersed raw materials, and any sign of contamination by foreign matter. The surface of the geomembrane shall be clean at the time of the examination.
- B. Repair and non-destructively test each suspect location both in weld and non-weld areas. Do not cover geomembrane at locations that have been repaired until test results with passing values are available.
- C. Extrusion weld a patch over all "cross" or "tee" welds.
- D. Remove damaged geomembrane and replace with acceptable geomembrane materials if damage cannot be satisfactorily repaired.
- E. Repair, removal, and replacement is at Contractor's expense if the damage results from the Contractor's, Installer's , or the Contractor's subcontractor activities.
- F. Repair any portion of the geomembrane exhibiting a flaw, or failing a non-destructive test. Agreement upon the appropriate repair method will be determined between the Engineer and the Installer. Do not commence welding on liner until trial weld test sample, made by that equipment and operator, passes trial test. Repair procedures available include:

1. Patching: Used to repair large holes (over 3/8-inch diameter), tears (over 2 inches long), undispersed raw materials, contamination by foreign matter, and to cover cross and tee connections.
  2. Abrading and re-welding: Used to repair small sections of seams.
  3. Spot welding or seaming: Used to repair small tears (less than 2 inches long), pinholes or other minor, localized flaws.
  4. Capping: Used to repair large lengths of failed seams.
  5. Removing the seam and replacing with a strip of new material.
- G. In addition, satisfy the following procedures:
1. Abrade geomembrane surfaces to be repaired (extrusion welds only) no more than one (1) hour prior to the repair.
  2. Clean and dry all surfaces at the time of repair.
  3. The repair procedures, materials, and techniques must be accepted in advance of the specific repair by the Engineer and Installer.
  4. Extend patches or caps at least 6 inches beyond the edge of the defect, and round all corners of material to be patched and the patches to a radius of at least 3 inches.
- H. Verification of repair:
1. Number and log each patch repair.
  2. Non-destructively test each repair using methods specified in paragraph 3.04 of this Section.
  3. Reconstruct repairs until tests indicate passing results.

### **3.08 EXTRUSION WELDING**

- A. Use procedures to tack bond adjacent panels together that do not damage geomembrane and allow CQA tests to be performed.
- B. Purge welding apparatus of heat-degraded extrudate before welding.
- C. Bevel top edges of geomembrane a minimum of 45° and full thickness of geomembrane before extrusion welding.
- D. Clean seam-welding surfaces of oxidation by disc grinder or equivalent not more than 30 minutes before extruding weld. Change grinding discs frequently. Do not use clogged discs.
- E. Do not remove more than 4 mils of material when grinding.

- F. Grind across, not parallel to, welds.
- G. Cover entire width of grind area with extrudate.
- H. When restarting welding, grind ends of all welds that are more than five minutes old

### **3.09 HOT WEDGE WELDING**

- A. Do not weld on geomembrane until equipment has passed trial weld test.
- B. Place smooth insulating plate or fabric beneath hot welding apparatus after usage.
- C. Protect against moisture buildup between panels.
- D. Conduct field test welds once prior to start of work and once at midday.

### **3.10 FIELD QUALITY CONTROL AND QUALITY ASSURANCE**

- A. Field Quality Control will be conducted by the Installer. The Engineer will provide quality assurance as an independent verification of the Contractor's quality control procedures. The Manufacturer, and Installer will participate in and conform to all terms and requirements of the Engineer's CQA program and the Engineer will have a CQA Monitor on site. The Contractor is responsible for assuring this participation.
- B. The Contractor shall:
  - 1. Require the Installer to perform non-destructive field testing of the welds.
- C. Field Testing
  - 1. Non-destructively test all field seams over their full length using a vacuum test unit, air pressure (for double fusion seams only), spark testing, or other approved methods. Perform testing as the seaming progresses and not at the completion of all the field seaming. Record all required repairs and then complete all required repairs in accordance with this specification. The Engineer's CQA Monitor shall be present for testing and notified when there is a failure.
  - 2. Vacuum Testing Equipment –
    - a. A vacuum box assembly consisting of a rigid housing, a transparent viewing window, a soft neoprene gasket attached to the bottom, port hole, or valve assembly, and a vacuum gauge.
    - b. A vacuum pump assembly equipped with a pressure control.
    - c. A rubber pressure/vacuum hose with fittings and connections.
    - d. A soapy solution and an applicator.
  - 3. Vacuum Box Test Procedures.

- a. Place the box over the wetted seam area (soapy solution).
  - b. Ensure that a leak-tight seal is created.
  - c. Energize the vacuum pump and reduce the vacuum box pressure to approximately 10 inches of mercury, i.e., five-psi gauge.
  - d. Examine the geomembrane through the viewing window for the presence of soap bubbles for a period of not less than ten seconds. If bubbles appear on geomembrane seam, clean and repair hole causing bubbles as indicated in "Defects and Repairs" in this section.
4. Air pressure testing for seaming processes producing a double seam with an enclosed channel.
- a. Equipment, comprised of the following:
    - 1) An air pump (manual or motor driven) equipped with a pressure gauge capable of generating and sustaining a pressure over 40 psi and mounted on a cushion to protect the geomembrane.
    - 2) A rubber hose with fittings and connections.
    - 3) A sharp hollow needle or other approved pressure feed device.
    - 4) A pressure gauge with an accuracy of plus or minus one psi.
  - b. Test Procedures.
    - 1) Seal both ends of the welded seam to be tested
    - 2) Insert needle or other approved pressure feed device into the tunnel created by the weld.
    - 3) Energize the air pump to a minimum pressure of 30 psi, close valve and allow five minutes relaxation time to allow equilibration of channel, then sustain pressure for at least five minutes.
    - 4) If loss of pressure exceeds 3 psi, or otherwise approved, or does not stabilize, locate faulty area and repair in accordance with repair procedures described in this specification.
    - 5) Puncture opposite end of seam to release air. If blockage is present, locate and test seam on both sides of blockage.
    - 6) Remove needle or other approved pressure feed device and seal the penetration holes.
5. Spark Testing for penetrations or other difficult areas or as an alternative to vacuum testing.
- a. Equipment and Materials

- 1) 24-gauge copper wire.
  - 2) Low-amperage electric detector, 20,000 to 30,000 volt, with brush-type electrode capable of causing visible arc up to 3/4 inch from copper wire.
- b. Spark Testing Procedures.
- 1) Place copper wire within 1/4 inch of the edge of extrusion seam or clamp seal.
  - 2) Pass electrode over seam or clamp area and observe for spark. If a spark is detected perform a repair as indicated in "Defects and Repairs" in this section.

### **3.11 FIELD TESTING (PERFORMED BY INSTALLER)**

- A. Test the two, one-inch wide strips specified above. Test using the field tensiometer used for trial weld tests. Test for peel and shear, respectively.
- B. Both test strips must meet peel and shear requirements for welded seams specified in this Section.
- C. If any field test sample fails, follow failed test procedures outlined in this Section.

### **3.12 SEAMS THAT CANNOT BE NON-DESTRUCTIVELY TESTED: PERFORM THE FOLLOWING**

- A. If the weld is accessible to testing equipment prior to final installation, non-destructively test the weld prior to final installation.
- B. If the weld cannot be tested prior to final installation, cap strip the weld. The welding and cap-stripping operations must be observed by the Engineer and Installer for uniformity and completeness

### **3.13 ACCEPTANCE**

- A. Contractor retains all ownership and responsibility for geosynthetics until acceptance by the City.
- B. The City accepts geosynthetics installation when:
  1. The installation is complete.
  2. The City has received all required Submittal documents from the Contractor, Installer, and Manufacturer.
  3. Verification of the adequacy of all seams and repairs, including associated testing, is complete.
  4. Written certification documents have been received by the City.

**END OF SECTION**

## **SECTION 31 05 19.29 GEONETS**

### **PART 1 - GENERAL**

#### **1.01 SUMMARY**

- A. This section specifies furnishing and installing geonet used in landfill cap repairs around the Flare Station Pad and over the decommissioned West Concrete Pad.
- B. All work shall be in strict accordance with the Specifications, the CQA Plan, the Plans, and as directed by the Engineer. The Contractor shall provide a qualified geosynthetics installer to complete the work in this section, and the term "Contractor" in this Section may be inclusive of the geosynthetics installer.
- C. The Contractor shall provide all necessary equipment to accomplish the work in this Section, including loading and deployment equipment and man-power.

#### **1.02 RELATED DOCUMENTS**

- A. General Provisions of the Contract, including Part II General Conditions for Washington State Facility Construction and Part III Supplemental Conditions as Modified by the City of Tacoma, and other Division 01 Specification Sections apply to this Section.
- B. Section 31 05 13 – Earthwork for Landfill Cap Repair
- C. Section 31 05 19.16 – Geomembrane
- D. Section 31 05 19.13 – Geotextiles

#### **1.03 CODES AND REFERENCES**

- A. The following standards and test methods are included as a part of this section insofar as specified and modified herein. In case of conflict between the requirements of this Section and the listed standards and test methods, the requirements of this section shall prevail.
  - 1. ASTM D1505. Standard Test Method for Density of Plastics by the Density-Gradient Technique
  - 2. ASTM D4716. Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head
  - 3. ASTM D5199. Standard Test Method for Measuring Nominal Thickness of Geotextiles and Geomembranes

#### **1.04 DEFINITIONS**

- A. Manufacturer: Responsible for the production of geonet rolls.

- B. Installer: The party responsible for field handling, storing, deploying, repairing, anchoring, and any other aspects of installing the geonet. The installer is also responsible for transportation of the material to the site.
- C. Construction Quality Assurance Consultant (CQAC): The party, independent from the Manufacturer or Installer, responsible for observing and documenting activities related to the quality assurance of the production and installation of the geomembrane. The CQAC person on site is referred to herein as the Engineer or the CQA Monitor. Also responsible for issuing a construction monitoring report and certification sealed by a Registered Professional Engineer in the State of Washington.

#### **1.05 SUBMITTALS**

- A. The Contractor will submit the following to the Engineer a minimum of two weeks before installation:
  - 1. The Installer's Geosynthetic Field Installation Quality Assurance Plan – including equipment list and the qualifications of the personnel who will be performing seaming to the City two weeks prior to installation.
  - 2. Provide certification sheets from the geonet manufacturer that the geonet being sent to the project meet the product specifications outlined in this Section.
- B. Submit, prior to delivery, manufacturer's certificates of compliance with specified product requirements. This submittal includes Manufacturer's Quality Control (MQC) testing.
- C. Name of Manufacturer, and documentation of the following minimum qualifications:
  - 1. The manufacturer and fabricator shall have produced at least 10 million square feet of geocomposite materials meeting the specifications for this project prior to producing materials for this project.
- D. The Installer will submit the following to the City upon completion of installation:
  - 1. Certificate stating the geonet has been installed in accordance with the Contract Documents.
  - 2. Material and installation warranties

#### **1.06 QUALITY ASSURANCE**

- A. Field Quality Control will be conducted by the Contractor geosynthetic installer's quality control (QC) Tester. The Engineer will provide quality assurance as an independent verification of the Contractor's quality control procedures. The Manufacturer, and Installer will participate in and conform to all terms and requirements of the Engineer's CQA program as detailed in the document entitled *Construction Quality Assurance Manual, Tacoma Landfill Flare Station Cap Repairs, City of Tacoma Landfill, Tacoma, Washington*, which is attached to these

Specifications and incorporated in by reference and included in Appendix A. The Contractor is responsible for assuring this participation.

#### 1.07 STORAGE AND HANDLING

- A. Protect geosynthetics from ultraviolet light exposure, precipitation, inundation, mud, dirt, dust, puncture, cutting, and other damaging or deleterious condition.
- B. Immediately restore damaged protective covering.
- C. Handling on Site:
  - 1. Use appropriate handling equipment to load, move, or deploy geonet rolls. Appropriate handling equipment includes cloth chokers and spreader bar for loading, spreader, and roll bars for deployment. Dragging panels on ground surface will not be permitted.
  - 2. Do not fold geonet material; folded material will be rejected.
  - 3. Installer is responsible for off-loading, storage, and transporting material from storage area to installation site.

#### 1.08 WARRANTY

- A. Material shall be warranted, on a pro-rata basis, against defects for a period of 1 year from the date of the geonet installation.
- B. Installation shall be warranted against defects in workmanship for a period of 1 year from the date of geonet completion

### **PART 2 - PRODUCTS**

#### 2.01 GEONET

- A. The geonet shall be made of HDPE and conform to the following physical properties:

<b><u>Physical Property</u></b>	<b><u>Test Method</u></b>	<b><u>Minimum Requirement</u></b>
Thickness, mils minimum	ASTM D 5199	225
Specific Gravity, g/cm <sup>3</sup> (minimum)	ASTM D 1505	0.94
Transmissivity Meters <sup>2</sup> /s @ 10,000 psi, Steel Plate Boundary, Hydraulic gradient =0.1	ASTM D 4716	0.0025

## **2.02 MANUFACTURER SOURCE QUALITY CONTROL**

- A. Perform quality control tests of geonet, at a minimum, once every one hundred thousand (100,000) square feet to evaluate manufacturer's published material characteristics.
- B. The City will reject rolls for which quality control requirements are not met.
- C. Certify the quality of the rolls of geonet.
- D. Provide quality control certificates for each lot and each shift's production. The quality control certificates must include:
  - 1. Roll numbers and identification.
  - 2. Sampling procedures.
  - 3. Results of quality control tests, including a description of test methods used.

## **2.03 LABELING**

- A. Mark or tag geonet rolls with the following information
  - 1. Manufacturer's name.
  - 2. Product identification.
  - 3. Lot number.
  - 4. Roll number.
  - 5. Roll dimensions.
  - 6. Mark special handling requirements on rolls.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Prior to installation of geonet, the Contractor shall examine underlying construction for conformance with specifications and verify the construction below the geonet has been approved by the Engineer.

### **3.02 PROTECTION**

- A. When placing soil materials over geonet, the Contractor shall ensure the following:
  - 1. No damage to geonet.
  - 2. No slippage of geonet on underlying layers.
  - 3. No excessive tensile stresses in the geonet.

### **3.03 DEPLOYMENT**

- A. The drainage net shall be installed in accordance with the Manufacturer's recommendations as indicated on the Drawings, or as specified herein.
- B. The HDPE drainage net shall be rolled out downhill.
- C. Before installing the drainage net, the membrane material shall be cleaned of all dirt, dust, and other foreign material.
- D. No mobile equipment will be allowed directly on the drainage net or the underlying geomembrane.
- E. Adjacent rolls of drainage net will be connected together with plastic tie wraps. Tie wraps shall be placed such that the edges of the drainage net will not be allowed to curl and damage the overlying geonet.

### **3.04 ACCEPTANCE**

- A. Contractor retains all ownership and responsibility for geosynthetics until acceptance by the City.
- B. The City accepts geosynthetics installation when:
  - 1. The installation is complete.
  - 2. The City has received all required Submittal documents from the Contractor, Installer, and Manufacturer.
  - 3. Verification of the adequacy of all seams and repairs, including associated testing, is complete.
  - 4. Written certification documents have been received by the City.

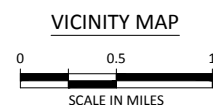
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## **APPENDIX A**

### **PLAN SET**

**SITE PLAN**

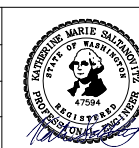
**ENGINEER:**  
LANDAU ASSOCIATES, INC.  
155 NE 100TH STREET, SUITE 302  
SEATTLE, WASHINGTON 98125  
CONTACT:  
KATIE SALTANOVITZ, P.E.  
(425) 329-0285  
ksaltanovitz@landauinc.com



SHEET INDEX		
DWG. NO.	SHT. NO.	SHEET TITLE
G1.0	1	COVER SHEET
G1.1	2	GENERAL NOTES
C1.0	3	SITE PLAN
C2.0	4	FLARE STATION PAD LINER REPAIR DETAILS



0.	ISSUED FOR AGENCY REVIEW	5/5/23	KMS	FINAL CONSTRUCTION CHECKED	DATE 5/5/23	SCALE AS NOTED	
	REVISION	DATE	RRD	BY	DESIGNED KMA	CHECKED KMS	
				DATE	DRAWN JJV		
				FIELD BOOKS	DRAWING NAME P COVER.dwg		



CITY OF TACOMA  
 ENVIRONMENTAL SERVICES DEPARTMENT

---

SOLID WASTE MANAGEMENT  
 LANDFILL GAS FLARE STATION CAP REPAIR  
 COVER SHEET

SPEC. NO.	-
PROJECT NO.	-
DWG NO.	G1.0

GENERAL CONSTRUCTION NOTES:

1.
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND SPECIFICATIONS.
2.
- THE CONTRACTOR IS RESPONSIBLE FOR HIRING A PRIVATE UTILITY LOCATOR AND IDENTIFYING ALL UTILITIES IN THE VICINITY OF THE WORK AREA PRIOR TO THE BEGINNING OF CONSTRUCTION. ALL KNOWN UTILITIES HAVE BEEN IDENTIFIED ON THE PROJECT DRAWINGS.

TEMPORARY EROSION/SEDIMENT CONTROL NOTES

1.
- IMPLEMENTATION OF THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THE TESC BEST MANAGEMENT PRACTICES (BMPS) IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
2.
- TESC MEASURES (FACILITIES AND BMPS) SHOWN IN THESE DRAWINGS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THE TESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, PUMPS, STORAGE TANKS, RELOCATION OF DITCHES AND SILT FENCING, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS. THEREFORE, DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL ADDRESS ANY CHANGED OR NEW CONDITIONS THAT MAY BE CREATED BY THE CONTRACTOR'S ACTIVITIES AND PROVIDE ADDITIONAL TESC MEASURES THAT MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES.
3.
- TESC MEASURES SHALL BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND EXCAVATION ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER SURFACE WATERS, DRAINAGE SYSTEMS, ADJACENT PROPERTIES, AND/OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.
4.
- TESC MEASURES SHALL BE INSPECTED DAILY BY THE CONTRACTOR DURING ACTIVE WORK AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED PROPER FUNCTIONING.
5.
- THE CONTRACTOR SHALL MAINTAIN A FULLY STOCKED SPILL KIT ON SITE AT ALL TIMES.
6.
- ANY AREA NEEDING ADDITIONAL TESC MEASURES, BUT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN 24 HOURS.
7.
- TESC MEASURES ON INACTIVE SITE AREAS SHALL BE MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.
8.
- POLYETHYLENE SHEETING SHALL BE APPLIED TO COVER SOIL STOCKPILES THAT REMAIN MORE THAN 48 HOURS. PLASTIC SHEETING SHALL HAVE MINIMUM THICKNESS OF 20 MILS.
9.
- SHOULD TESC MEASURES NOT BE PROPERLY INSTALLED AND MAINTAINED, THE OWNER MAY STOP ALL WORK NOT PERTAINING TO THE CORRECTION OF TESC PROBLEMS UNTIL TESC MEASURES ARE RETURNED TO THE PROPER OPERATION.
10.
- ALL TESC BMPS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
11.
- THE WASHINGTON STATE CLEAN AIR ACT REQUIRES THE USE OF ALL KNOWN, AVAILABLE, AND REASONABLE MEANS OF CONTROLLING AIR POLLUTION, INCLUDING DUST. DUST CAN BE CONTROLLED BY WETTING EXPOSED SOILS AND INSTALLING AND MAINTAINING ROCK CONSTRUCTION ENTRANCES. CONSTRUCTION VEHICLE TRACK-OUT IS A MAJOR SOURCE OF DUST AND ANY EVIDENCE OF TRACK-OUT CAN TRIGGER FINES FROM THE DEPARTMENT OF ECOLOGY OR THE PUGET SOUND AIR POLLUTION CONTROL AGENCY THAT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12.
- PORTABLE SANITARY FACILITIES IF USED SHALL BE LOCATED AT LEAST 25 FEET FROM ANY STORM WATER INLET OR WATER BODY AND SHALL BE SERVICED REGULARLY AS NEEDED.
13.
- STATIONARY EQUIPMENT (E.G., GENERATORS, LIGHT STANDS) CONTAINING ANY AMOUNT OF FUELS AND OR OILS SHALL BE EQUIPPED WITH SECONDARY CONTAINMENT.

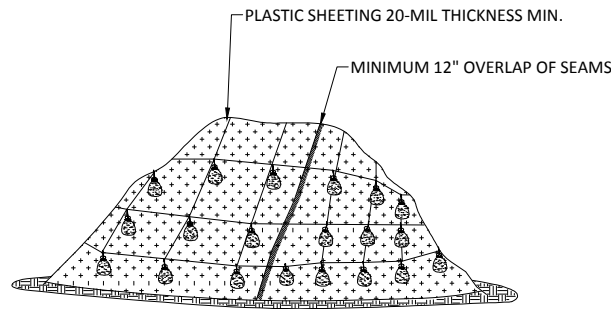
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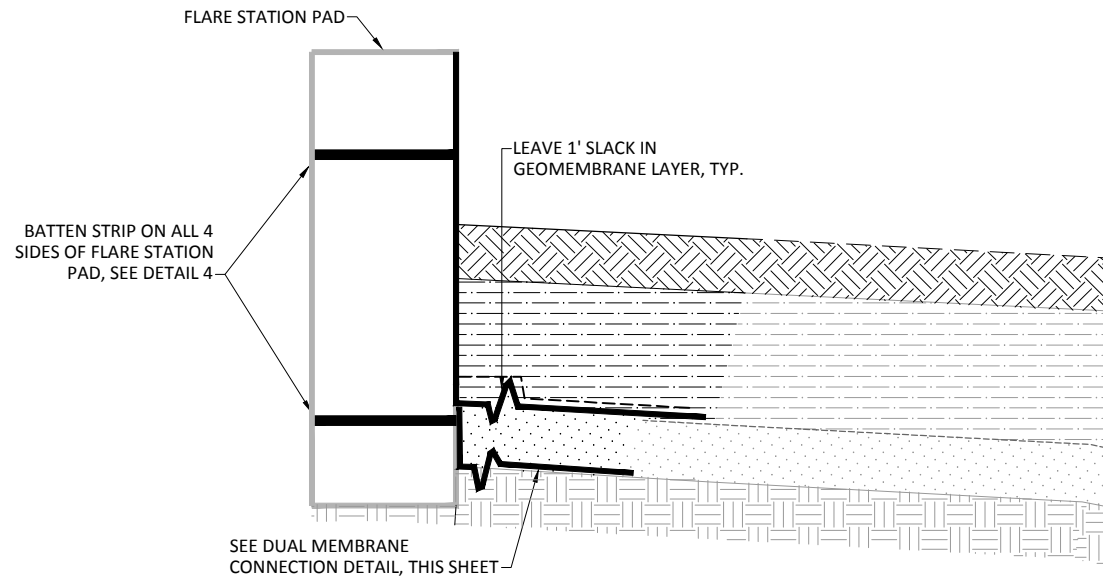
SOLID WASTE MANAGEMENT  
LANDFILL GAS FLARE STATION CAP REPAIR  
GENERAL NOTES



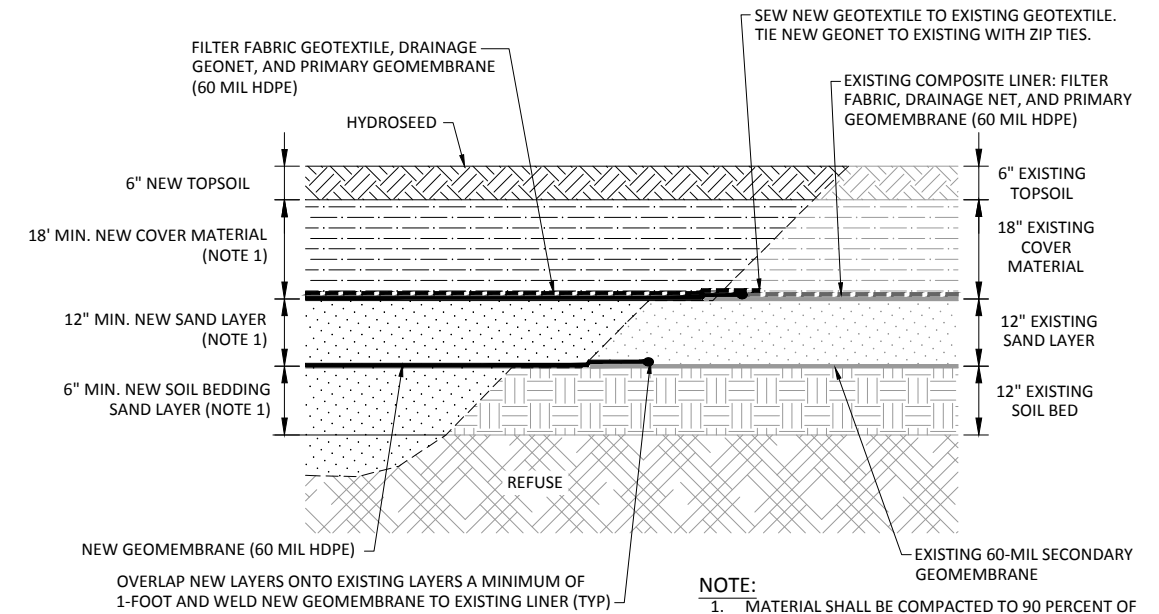


- NOTES:**
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
  2. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

**1** SOIL STOCKPILE COVER  
N.T.S.

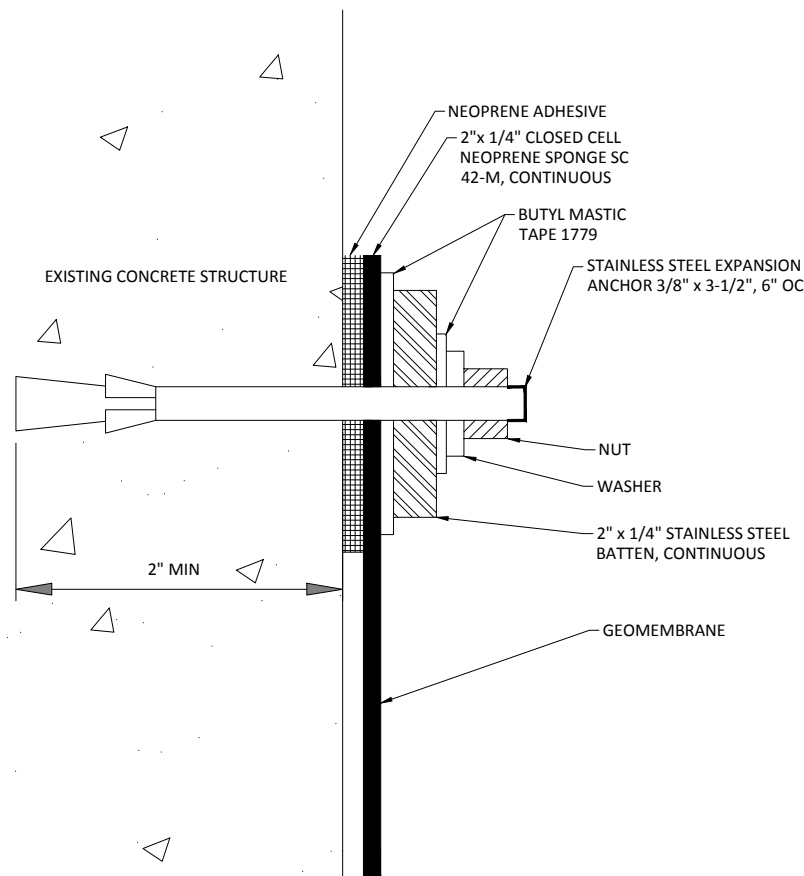


**2** TYPICAL CAP REPAIR  
N.T.S.

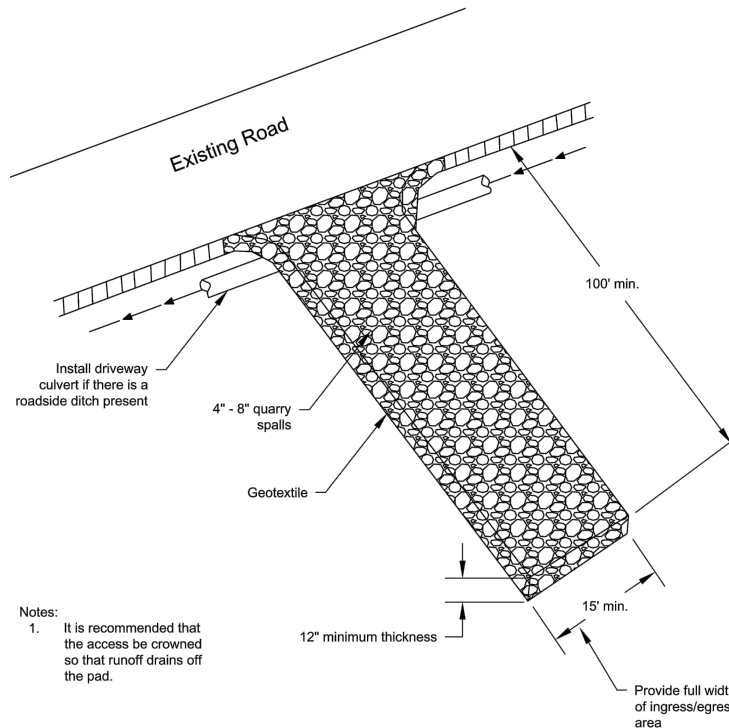


- NOTE:**
1. MATERIAL SHALL BE COMPACTED TO 90 PERCENT OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.

**3** DUAL MEMBRANE CONNECTION  
N.T.S.



**4** TYPICAL BATTEN STRIP CONNECTION FOR FLARE STATION PAD  
N.T.S.



- Notes:**
1. It is recommended that the access be crowned so that runoff drains off the pad.

**5** TEMPORARY CONSTRUCTION ENTRANCE  
N.T.S.



**LANDAU ASSOCIATES**  
155 NE 100TH ST, STE. 302  
SEATTLE, WASHINGTON, 98125  
(206) 631-8680



ISSUED FOR AGENCY REVIEW

REVISION

DATE

APPD

5/5/23

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FINAL CONSTRUCTION CHECKED

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DATE

FIELD BOOKS

DATE

5/5/23

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CITY OF TACOMA  
ENVIRONMENTAL SERVICES DEPARTMENT  
SOLID WASTE MANAGEMENT  
LANDFILL GAS FLARE STATION CAP REPAIR  
FLARE STATION PAD LINER REPAIR DETAILS

SPEC. NO.

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PROJECT NO.

-

DWG. NO.

C2.0

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**Appendix B**  
**Construction Quality Assurance Manual – Landfill Gas Flare Station**  
**Pad Cap Repairs**



# CONSTRUCTION QUALITY ASSURANCE MANUAL

## LANDFILL GAS FLARE STATION PAD CAP REPAIRS

City of Tacoma Landfill  
Tacoma, Washington

July 14, 2023

Prepared for

City of Tacoma  
Tacoma, Washington

## Construction Quality Assurance Manual City of Tacoma Solid Waste Management Landfill Gas Flare Station Cap Repair Tacoma, Washington

This document was prepared by, or under the direct supervision of, the technical professionals noted below.

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Project Manager

Kaila Anderson, PE

Document reviewed by:



Quality Reviewer and Principal Engineer

Katie Saltanovitz, PE

Date: July 14, 2023  
Project No.: 0094089.090  
File path: \\tacoma3\project\094\089.090\R\CQA Plan\2023 05 15\Landau\_Tacoma Landfill CQA\_FINAL\_7.14.2023  
Project Coordinator: KJG

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## TABLE OF CONTENTS

	Page
1.0 INTRODUCTION .....	1-1
1.1 Document Format .....	1-2
1.2 Reference Documents .....	1-2
1.3 Definitions .....	1-2
2.0 GENERAL REQUIREMENTS .....	2-1
2.1 Meetings.....	2-1
2.1.1 Pre-Construction Meetings.....	2-1
2.1.2 Progress Meetings.....	2-2
2.1.3 Other Meetings .....	2-2
2.2 Responsibilities of Personnel .....	2-2
2.2.1 Responsibilities of Construction Manager.....	2-2
2.2.2 Responsibilities of the Design Engineer of Record .....	2-2
2.2.3 Responsibilities of the Construction Quality Assurance Engineer of Record .....	2-3
2.2.4 Responsibilities of the Construction Quality Assurance Monitors .....	2-3
2.2.5 Responsibilities of the Contractors .....	2-3
2.2.6 Responsibilities of the Independent Geosynthetic Laboratory . <b>Error! Bookmark not defined.</b>	
2.3 Control of Construction Documents, As-Built Records, and Forms .....	2-4
2.3.1 Project Control of Construction Documents .....	2-4
2.3.2 Project Control of As-Built Information .....	2-4
2.3.3 Project Control of Forms .....	2-4
2.4 Processing Reports .....	2-4
2.4.1 Processing Daily Reports .....	2-4
2.4.2 Processing Test Reports .....	2-4
2.4.3 Processing Project Records.....	2-5
2.5 Correcting Non-Conformance Work .....	2-5
2.5.1 Observation of Non-Conformance .....	2-5
2.5.2 Determining Extent of Non-Conformance.....	2-5
2.5.3 Documenting Non-Conformance .....	2-5
2.5.4 Corrective Measures .....	2-5
2.5.5 Verification of Corrective Measures .....	2-5
2.6 Materials Quality Verification .....	2-6
2.6.1 Samples..... <b>Error! Bookmark not defined.</b>	
2.6.2 Materials Submittals .....	2-6
2.6.3 Certificates of Compliance.....	2-6
2.7 Calibration of Equipment and Materials .....	2-6
3.0 CONSTRUCTION QUALITY ASSURANCE FOR GEOSYNTHETICS.....	3-1
3.1 Geomembrane Quality Assurance .....	3-1
3.1.1 Pre-Construction Submittal Review .....	3-1

3.1.2	Delivery.....	3-2
3.1.3	Conformance Testing .....	3-2
3.1.4	Review of Installer’s Geomembrane Panel Drawings .....	3-2
3.1.5	Geomembrane Subgrade Preparation.....	3-2
3.1.6	Panel Layout As-Built.....	3-3
3.1.7	Panel Placement Documentation.....	3-3
3.1.8	Trial Welds .....	3-4
3.1.9	Production Welds .....	3-4
3.1.10	Non-Destructive Seam Testing.....	3-5
3.1.11	Repairs.....	3-6
3.1.12	Wrinkles .....	3-6
3.1.13	Geomembrane Acceptance.....	3-7
3.2	Geotextile and Geonet Quality Assurance .....	3-7
3.2.1	Pre-Construction Submittal Review .....	3-7
3.2.2	Conformance Testing .....	3-7
3.2.3	Delivery.....	3-7
3.2.4	Geotextile and Geonet Subsurface Preparation .....	3-8
3.2.5	Geotextile and Geonet Placement and Seaming .....	3-8
3.2.6	Geotextile and Geonet Repairs.....	3-8
4.0	DOCUMENTATION .....	4-1
4.1	Daily Recordkeeping.....	4-1
4.1.1	Daily Record of Construction Progress.....	4-1
4.1.2	Observation and Test Data Sheets .....	4-1
4.1.3	Non-Conformance Reports .....	4-2
4.2	Photographs .....	4-2
4.3	Design and Specification Changes.....	4-2
4.4	Final Construction Report .....	4-2
5.0	REFERENCES .....	5-1

## LIST OF ABBREVIATIONS AND ACRONYMS

°F .....	degrees Fahrenheit
ASTM .....	American Society for Testing and Materials
City .....	City of Tacoma
CNG .....	Compressed Natural Gas
CQA .....	construction quality assurance
CQC .....	construction quality control
EPA .....	U.S. Environmental Protection Agency
FCR .....	final construction report
FTB .....	film tearing bond
HDPE .....	high-density polyethylene
Landau .....	Landau Associates, Inc.
Landfill .....	City of Tacoma Landfill
LFG .....	landfill gas
mil .....	millimeters
MQC .....	manufacturing quality control
QC .....	quality control
SWM .....	City of Tacoma Solid Waste Management Division
TCPHD .....	Tacoma-Pierce County Health Department
WAC .....	Washington Administrative Code

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## 1.0 INTRODUCTION

The purpose of this Construction Quality Assurance (CQA) Manual is to describe the CQA procedures to be followed by the City of Tacoma (City), Landau Associates, Inc. (Landau; the City's engineering and environmental consultant), and the construction Contractor before and during repair efforts to the landfill cap at the City of Tacoma Landfill (Landfill). The City is repairing the existing cap surrounding the landfill gas (LFG) flare station pad (project), which has been damaged due to settlement. The project will include demolishing the existing West Concrete Pad and making repairs to the dual geomembrane liner around the existing Flare Station Pad and West Concrete Pad.

The Landfill is located at 3510 South Mullen Street in Tacoma, Washington. The City Solid Waste Management Division (SWM) has operated the Landfill as a sanitary landfill since 1960. SWM currently operates the Landfill under a permit with the Tacoma-Pierce County Health Department (TPCHD) in accordance with provisions of Washington Administrative Code (WAC) 173-304 and WAC 173-351. The Landfill was placed on the National Priorities List in 1983 by the U.S. Environmental Protection Agency (EPA) due to soil and groundwater contamination. The final remedy is complete, and the Landfill was considered to be effectively closed as of November 2013. Environmental control systems such as a landfill cap, condensate collection system, central area leachate collection system, and LFG collection system are required as part of the final remedy.

The project area (just west of the Central Area) is capped with a dual membrane cap. The existing dual membrane landfill cap consists of (from the cover surface downward):

- Surface vegetation
- 6 inches of topsoil
- 18 inches of cover soil
- A filter fabric geotextile layer
- A high-density polyethylene (HDPE) drainage geonet
- 60-millimeter (mil)-thickness HDPE geomembrane liner
- 12 inches of sand
- 60-mil-thickness HDPE geomembrane liner
- 12 inches of soil bedding
- Municipal solid waste.

This CQA Manual presents guidance pertaining to general and specific work element requirements for **subgrade preparation**, **monitoring geosynthetic repair and installation**, and **final reporting**. General requirements include the responsibilities of the CQA Monitors, documentation control, and reporting procedures.

Landau will be responsible for implementing and managing the CQA program described in this Manual. Upon completion of construction, the CQA organization must prepare a final construction report (FCR).

The FCR must include information generated through implementation of the CQA program and must document the extent to which construction was performed in accordance with the construction drawings, technical specifications, and design intent.

## 1.1 Document Format

This CQA Manual is presented in the following four sections:

- Section 1.0 is the introduction, which presents a description of the document format, definitions, and terms used throughout the document.
- Section 2.0 presents general requirements of the CQA program and organization.
- Section 3.0 presents special requirements for specific work items of the construction, including procedures such as materials verification, test standards, testing frequencies, conformance and construction testing, and construction monitoring for each work item.
- Section 4.0 presents methods of documenting and record keeping.

## 1.2 Reference Documents

The following reference documents provide background information regarding design of the cover repair:

- City of Tacoma design plans and specifications prepared by Landau related to this Flare Station Cap Repair Project (Landau 2023)

## 1.3 Definitions

Whenever the terms listed below are used in this Manual, the intent and meaning will be interpreted as indicated.

**ASTM International (ASTM):** American Society for Testing and Materials provides standard test methodologies referenced in the project specifications and this CQA Manual.

**Construction Manager:** The construction manager is the authorized representative of the City, responsible for coordinating activities of contractors and the CQA organization, and for administering construction contracts.

**Construction Inspector:** The construction inspector is the authorized representative of the City, responsible for field CQA oversight and documentation.

**Construction Quality Assurance:** CQA is a planned and systematic pattern of procedures and documentation designed to provide confidence that items of work or services meet the requirements of the project's construction drawings and technical specifications.

**CQA Engineer of Record:** The CQA engineer of record represents the CQA organization and is responsible for certifying that construction complies with the project's construction documents and their approved modifications.

**CQA Monitors:** A CQA monitor is part of the CQA organization and is responsible for implementing the project's quality assurance program and observing, testing, and documenting construction in accordance with the construction drawings and technical specifications.

**CQA Professional:** The CQA professional (also known as the CQA organization) is an organization or individual that monitors and documents construction to provide assurance to the owner that products and workmanship provided by the contractor meet the requirements of the project's construction drawings, technical specifications, and approved work changes. The CQA professional is not responsible for supervision or direction of the means, methods, site safety, or actual work of the contractor, or of any other consultant or subcontractor not retained by the CQA professional. The CQA professional is a third party, independent of the owner and contractor; however, some CQA monitoring may be performed by the Owner's personnel, who will report to the CQA professional. The CQA professional for this project is Landau. The CQA Monitors and the CQA Engineer of Record are employed by the CQA Professional.

**Construction Quality Control:** Construction quality control (CQC) includes those actions that provide a means to measure and regulate the characteristics of an item or service to comply with the requirements of the project's construction drawings and technical specifications. The contractor must perform CQC activities identified in the technical specifications.

**Contract Documents:** Contract documents are the official set of documents issued by the owner, which include bidding requirements, contract forms, contract conditions, technical specifications, construction drawings, addenda, and contract modifications pertaining to the project.

**Construction Drawings:** Construction drawings are the official plans, profiles, typical cross-sections, elevations, and details, as well as their amendments and supplemental drawings that show the locations, character, dimensions, and details of the work to be performed on the project. Construction drawings are also referred to as the "plans."

**Contractor:** The contractor is the person or persons, firm, partnership, corporation, or any combination—private, municipal, or public—which, as an independent contractor, has entered into a contract with the owner, and who is referred to throughout the contract documents by singular number and masculine gender.

**Design Engineer:** Design engineers are the individuals or firms responsible for the design and preparation of the project construction drawings and technical specifications. Also referred to as "designer," "engineer," or "design engineer of record." The design engineer for this project is Landau.

**Design Engineer of Record:** The design engineer of record is the authorized representative of the design engineer, who is the individual responsible for design of the project and approving any changes to the design during construction.

**Geomembrane:** A geomembrane is a geosynthetic lining material, also referred to as flexible membrane liner, membrane, liner, or sheet.

**Geosynthetic:** A geosynthetic is a planar product manufactured from polymeric material used with soil, rock, earth, or other geotechnical engineering-related material as an integral part of a man-made project, structure, or system (ref. ASTM D4439). Geosynthetics include various geotextiles, geomembranes, geogrids, and geonets.

**Geosynthetics Contractor:** The geosynthetics contractor is the person or firm responsible for geosynthetic construction. This definition applies to any party installing geosynthetics, even if not his primary function. Also referred to as the “contractor” or “installer.”

**Manufacturing Quality Control:** Manufacturing quality control (MQC) is a planned system of inspections that is used to directly monitor and control the manufacture of a material which is factory-originated. MQC is normally performed by the manufacturer of geosynthetic materials and is necessary to ensure minimum (or maximum) specified values in the manufactured product. MQC refers to measures taken by the manufacturer to determine compliance with the requirements of materials and workmanship as stated in certification documents and technical specifications (ref. EPA/600/R-93/182).

**Manufacturing Quality Assurance:** Manufacturing quality assurance (MQA) is a planned system of activities that provides assurance that the materials were constructed as specified in the certification documents and technical specifications. MQA includes manufacturing facility inspections, verifications and audits, and evaluation of the raw materials (resins and additives) and geosynthetic products to assess the quality of the manufactured materials. MQA refers to measures taken by the MQA organization to determine if the manufacturer is in compliance with the product certification and technical specifications for the project (ref. EPA/600/R-93-182).

**Non-Conformance:** Non-conformance is a deficiency in characteristic, documentation, or procedure that renders the quality of an item or activity unacceptable or indeterminate. Examples of non-conformances include, but are not limited to, physical defects, test failures, and inadequate documentation.

**Owner:** The owner is the City of Tacoma.

**Panel:** A panel is a unit area of the geosynthetics that is seamed in the field or in the fabricator’s plant.

**Procedure:** A procedure is a document that specifies or describes how an activity is to be performed.

**Project Documents:** Project documents are contractor submittals, construction drawings, record drawings, technical specifications, shop drawings, CQC and CQA plans, safety plan, and project schedule.

**Record Drawings:** Record drawings record the constructed dimensions, details, and coordinates of the project (also referred to as “as-builts”).

**Technical Specifications:** Technical specifications are the qualitative and quantitative descriptions for manufacturing and installing products and materials, and for workmanship upon which the contract is based.

**Testing:** Testing provides verification that an item meets specified requirements by subjecting that item to a set of physical, chemical, environmental, or operating conditions.

## 2.0 GENERAL REQUIREMENTS

This section of the CQA Manual describes general requirements of the CQA organization (Landau). It includes general requirements for meetings, responsibilities of the project personnel, control of project records and documentation, processing reports, correction of non-conforming work, procedures for material quality verification, and test equipment calibration.

### 2.1 Meetings

In order to facilitate construction and to clearly define construction goals and activities, close coordination among the owner, design engineers, construction manager, CQA monitors, and contractor is essential. To meet this coordination objective, pre-construction and progress meetings will be held.

#### 2.1.1 Pre-Construction Meetings

A pre-construction meeting will be held at the site and be attended by the owner, contractor, CQA engineer of record, construction manager, CQA monitors, and others designated by the owner. The purpose of this meeting will be to:

- Present a proposed construction progress schedule and identify submittals as required by the contract documents
- Discuss procedures for handling submittals
- Discuss the direction of correspondence, and coordinate responsibility between contractor and owner
- Discuss applications for payment and progress payment procedures
- Discuss change order procedures
- Discuss the City's site regulations
- Review the construction drawings, technical specifications, CQA plan, work area security, safety procedures, and related issues
- Provide all parties with relevant documents (e.g., copies of the construction drawings)
- Review responsibilities for each party
- Define lines of communication and authority
- Establish reporting and documenting procedures
- Review testing equipment and procedures
- Establish testing protocols and procedures for correcting and documenting construction or non-conformance
- Conduct a site inspection to discuss work area, stockpile areas, laydown areas, access roads, haul roads, and related items.

The construction manager must take the minutes of the meeting and provide copies to all parties present at the meeting.

## 2.1.2 Progress Meetings

Weekly progress meetings are to be held and lead by the contractor. At a minimum, the CQA monitor, construction inspector, and contractor must attend these meetings. The purpose of these meetings is to:

- Review test data
- Discuss the contractor's personnel and equipment assignments for the week
- Review the previous week's activities and accomplishments
- Resolve any outstanding problems or disputes.

## 2.1.3 Other Meetings

As required, special meetings will be held to discuss problems or non-conformances. At a minimum, the owner, construction manager and/or construction inspector, CQA monitors, and contractor will attend these meetings. If the problem requires a design modification and subsequent change order, the design engineer of record should also be present. The construction manager must document the meeting.

## 2.2 Responsibilities of Personnel

### 2.2.1 Responsibilities of Construction Manager

The construction manager is the owner's onsite representative responsible for contract administration, budget, schedule, and coordination between parties. The construction manager will also be the key point for regulatory contact. The construction manager will request assistance from the owner, design engineer of record, and CQA monitors to resolve construction or regulatory issues.

### 2.2.2 Responsibilities of the Design Engineer of Record

The design engineer of record is responsible for the design as it exists at the time construction begins. The design engineer of record must approve all design changes and clarifications to design questions made during construction.

Katie Saltanovitz, PE  
Principal Engineer  
Landau Associates, Inc.  
155 NE 100th Street, Suite 302  
Seattle, WA 98125  
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Email: [ksaltanovitz@landauinc.com](mailto:ksaltanovitz@landauinc.com)

### **2.2.3 Responsibilities of the Construction Quality Assurance Engineer of Record**

The CQA engineer of record is responsible for certifying that construction was performed in accordance with the design intent, construction drawings, technical specifications, and any approved design changes made during construction.

The CQA engineer of record for this project is:

Katie Saltanovitz, PE  
Principal Engineer  
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Seattle, WA 98125  
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### **2.2.4 Responsibilities of the Construction Quality Assurance Monitors**

CQA monitors represent the owner by monitoring and testing the contractor's work and will consist of personnel from the CQA organization. The monitors observe and document the activities of the contractor in sufficient detail and with continuity over time to provide a high level of confidence that the work product fully complies with the intent of the construction drawings and technical specifications. The monitors also perform tests, when appropriate, to provide a high level of confidence that the characteristics of the work meet the requirements of the construction drawings and technical specifications.

Whenever monitors perform visual observation or perform tests, they are responsible for timely preparation and processing of all required documentation and reports. Accurate and concise reports must be prepared for all monitoring activities and for each test performed. Documentation includes, at a minimum, the preparation of daily report forms, testing report forms, and geosynthetic report forms.

### **2.2.5 Responsibilities of the Contractors**

The contractors are responsible for coordinating amongst themselves, scheduling and performing the work within the time frame and budget agreed to in the contract, performing the work in accordance with the construction drawings and technical specifications, and implementing quality control (QC) procedures to document that construction complies with the technical specifications. The contractors are expected to cooperate with the CQA monitors and construction manager to achieve a quality product.

## **2.3 Control of Construction Documents, As-Built Records, and Forms**

### **2.3.1 Project Control of Construction Documents**

The construction manager will control construction documents, including technical specifications, construction drawings, and change orders. The construction manager maintains one or more copies of the most current set of construction drawings and technical specifications at the project site for use by the contractor and CQA monitors. Upon issuance of new copies or revisions, it is the responsibility of the construction manager to notify the contractor and CQA staff of the revisions, to provide revised construction drawings and technical specifications, and to ensure the recall of all copies of the construction drawings and technical specifications that do not include the latest revisions.

### **2.3.2 Project Control of As-Built Information**

The CQA monitors and the contractor collect as-built information. During construction, the contractor is responsible for compiling this information into one set of construction drawings and technical specifications, which will be maintained in the City's online eBuilder portal. These construction drawings and technical specifications will be clearly marked as "project as-built drawings and technical specifications." At the completion of the project, all as-built information will be provided to the CQA engineer of record for use in preparing the FCR.

### **2.3.3 Project Control of Forms**

The CQA engineer of record will maintain a master of each CQA form used on the project. These include daily progress report forms, test report forms, and other project forms. Upon issuance of a new or modified form, the CQA engineer of record will recall and remove all superseded copies along with the master, notify the monitors, and provide new copies for their use.

## **2.4 Processing Reports**

### **2.4.1 Processing Daily Reports**

The CQA monitor must prepare a daily field report, which is then reviewed by the CQA professional for legibility, clarity, traceability, and completeness. All of the daily reports must be maintained in the City's online eBuilder portal and will be provided to the CQA engineer of record at the completion of the project.

### **2.4.2 Processing Test Reports**

The CQA monitor and contractor must complete a test report whenever testing is performed. The test reports must be peer reviewed or reviewed by the CQA engineer of record or CQA professional. The review includes a check for mathematical accuracy, conformance to test standards, conformance to technical specifications, and a check for clarity, legibility, traceability, and completeness. Copies of all test reports must be transmitted at the completion of the project to the CQA engineer of record via the City's online eBuilder portal.

## **2.4.3 Processing Project Records**

Project records will be completed as needed. Use of the project records is limited to the scope for which they are intended. For example, a pertinent telephone conversation will be recorded on a telephone record form. The record must be completed by filling in all the blanks provided on the form, followed by the signature of the individual completing the form. All project records are to be maintained in the City's eBuilder portal.

## **2.5 Correcting Non-Conforming Work**

### **2.5.1 Observation of Non-Conformance**

Whenever non-conforming work is discovered, the construction manager or CQA monitor must notify the contractor as soon as possible, beginning with the foreman or superintendent supervising the work in question. The CQA monitor must then notify the construction manager, the CQA engineer of record, and the CQA professional.

### **2.5.2 Determining Extent of Non-Conformance**

Whenever non-conformance is discovered, the construction manager or CQA monitor must determine the extent of the non-conforming work. Additional sampling, testing, and observations must be performed to determine the extent of the deficiency.

### **2.5.3 Documenting Non-Conformance**

All non-conformances must be documented in writing on daily field reports, test reports, and elsewhere, as appropriate. The documentation must occur immediately upon determining the extent of the non-conformance. A non-conformance that is considered serious or complex in nature, or which requires an engineering evaluation, requires that a Non-conformance Report be initiated and issued to the design engineer of record, construction manager, and contractor.

### **2.5.4 Corrective Measures**

For a simple or routine non-conformance, corrective measures must be determined by specification direction or, if none exists, the CQA monitor, construction manager, and contractor will discuss standard construction methods to correct the deficiency. For a non-conformance that requires a Non-conformance Report, the design engineer of record must determine corrective measures. A copy of the Non-conformance Report, with the design engineer of record's corrective measure determination, must be forwarded to the CQA monitor and contractor for implementation of the corrective action.

### **2.5.5 Verification of Corrective Measures**

Upon notification to the CQA monitor by the contractor that corrective measures are complete, the CQA monitor must verify completion. The verification must be accomplished by observations or re-testing and photographs. The CQA monitor must prepare written documentation of the corrective measures on

daily reports, logs, forms, and the non-conformance Report. The report must then become part of the project documentation and be maintained in the City's online eBuilder portal.

## **2.6 Materials Quality Verification**

### **2.6.1 Materials Submittals**

Material submittals may be used by the CQA organization to establish the acceptability of materials. When submittals are required, they must be submitted to the construction manager and be made available to the CQA organization. Acceptance and proper review of submittals is the responsibility of the design engineer of record.

### **2.6.2 Certificates of Compliance**

Where allowed in the technical specifications, certificates of compliance may be used by the CQA organization to establish the acceptability of materials in lieu of testing. These certificates generally state the material is in compliance with a particular code, standard, or specification.

## **2.7 Calibration of Equipment and Materials**

Before placing a piece of testing equipment into service, its accuracy must be verified by calibration. Types of equipment requiring calibration include nuclear gauges and scales. The calibration procedures and frequencies must be per the manufacturer's instructions or ASTM standards.

Whenever the equipment is suspect or is producing questionable results, it must be removed from service immediately and recalibrated.

## 3.0 CONSTRUCTION QUALITY ASSURANCE FOR GEOSYNTHETICS

Objectives of the geosynthetics CQA program are to:

- Assure that geosynthetic materials manufactured for the project meet quality standards defined in the technical specifications
- Assure that proper construction techniques and procedures are used during installation of geosynthetics
- Assure that the project is completed in accordance with the project construction drawings and technical specifications
- Identify and define problems that may occur during construction, and then verify these problems are corrected before construction is complete.

To assure compliance, the CQA program must include a review of the installer's QC submittals, performance of material conformance testing, documentation of construction testing, and visual observation of the installations. Geosynthetics conformance testing must take place before geosynthetics installation to verify material quality. Construction testing includes activities that occur during geosynthetics installation to verify installation quality.

The following types of geosynthetics will be used for this project:

- Geomembrane
- Filter fabric geotextile
- Drainage geonet.

### 3.1 Geomembrane Quality Assurance

#### 3.1.1 Pre-Construction Submittal Review

The geomembrane supplier must submit the following items to the CQA organization for review and testing:

- Manufacturer's description (cut sheet) of the proposed geomembrane documenting it will meet or exceed specified requirements
- Available and historical data documenting that the proposed geomembrane will meet specified interface residual strength
- Written instructions for storage, handling, installation, seaming, and repair of the proposed geomembrane.

No less than 14 days before installation of the geomembrane, the CQA organization or design engineer of record must review qualification submittals for conformance to the technical specifications.

### 3.1.2 Delivery

Upon delivery of geomembrane, the CQA monitor must:

- Inspect geomembrane rolls for damage potentially occurring during shipping and/or handling, then identify damaged materials and verify that they are set aside and not installed
- Verify that the geomembrane is stored in accordance with the technical specifications and is protected from puncture, dirt, grease, water, moisture, mud, mechanical abrasions, excessive heat, direct sunlight, and other damage
- Verify that each roll is marked or tagged with manufacturer's name, project identification, lot number, roll number, and roll dimensions, and that this information is documented on a geosynthetic receipt form
- Verify that all manufacturing documentation required by the technical specifications has been received
- Verify that a log of geosynthetics received is completed for all geomembrane materials received.

Damaged geomembrane must be rejected. If rejected, verify that the material is removed from the site or stored at a location separate from accepted geomembrane. Geomembrane that does not have proper manufacturer's documentation must be stored at a separate location until all documentation has been received, reviewed, and accepted.

### 3.1.3 Conformance Testing

- Conformance testing will not be required for this project.

### 3.1.4 Review of Installer's Geomembrane Panel Drawings

Before installing any geomembrane, the installer must submit shop drawings in accordance with the technical specifications. The shop drawings must show the proposed layout of the panels, if applicable, including panel identification numbers, field seams, and any other details that do not conform to the construction drawings. The CQA monitor must review these drawings before geomembrane installation.

### 3.1.5 Geomembrane Subgrade Preparation

Before geomembrane deployment, the surface on which the geomembrane will be installed must be prepared in accordance with the technical specifications and construction drawings. Before geomembrane installation, the CQA monitor and geosynthetics installer must inspect the surface. The CQA monitor must verify the following:

- No sharp objects or other materials that could puncture the geomembrane are present on the soil subgrade or cushion geotextile and geonet surface
- The geosynthetics installer has certified in writing on a form acceptable to the CQA manager that the surface on which the geomembrane will be installed is acceptable.

### 3.1.6 Panel Layout As-Built

During installation, the CQA monitor must maintain an up-to-date panel layout drawing that shows the following as-built information:

- Orientation and size of each geomembrane panel
- Roll numbers associated with each panel
- Assigned panel numbers
- Assigned seam numbers
- Repair locations.

### 3.1.7 Panel Placement Documentation

During panel placement operations, the CQA monitor must:

- Record panel numbers and dimensions on a panel/seam log
- Observe the panel surface as it is deployed and record all panel defects and defect corrective actions (panel rejected, patch installed, extrudate placed over the defect, etc.) on a repair sheet
- Verify, where required, that corrective actions are made in accordance with the technical specifications
- Verify that equipment used during deployment operations does not damage the geomembrane
- Verify that equipment used on the geomembrane does not leak hydrocarbons onto the geomembrane, and that corrective measures are taken to prevent leakage
- Verify that the surface beneath the geomembrane has not deteriorated since previous acceptance
- Verify that no stones, construction debris, or other items are beneath the geomembrane that could damage the geomembrane
- Verify that the geomembrane is not dragged across a potentially damaging surface. If the geomembrane is dragged across a surface that could damage it, inspect the geomembrane for scratches or tears, and repair or reject if necessary
- Verify that the geomembrane is not deployed in the presence of excess moisture (fog, dew, mist, etc.)
- Verify that the geomembrane is not placed when the air temperature is less than 40 degrees Fahrenheit (°F), or when standing water or frost is on the liner
- Verify that crews working on the geomembrane do not smoke, wear shoes that could damage the liner, or engage in activities that could damage the geomembrane
- Verify that methods used to deploy the geomembrane minimize wrinkles, and that panels are anchored to prevent movement by the wind
- Verify that the installer corrects any damaged geomembrane resulting from movement by wind
- Verify that no more panels are deployed than can be seamed on the same day.

The CQA monitor must inform both the installer and the construction manager if any of the above conditions are not met.

### 3.1.8 Trial Welds

Before the start of geomembrane welding and during welding operations, each welder and welding apparatus must be tested in accordance with the technical specifications to verify that the equipment is functioning properly. One trial weld must be made before the start of work and one at mid-shift. The trial weld sample must be 3 feet long and 12 inches wide, with the seam centered lengthwise. The CQA monitor must observe all trial welding operations and verify that the installer quantitatively tests each trial weld for peel and bonded seam strength (which will be referred to as “shear” in this Manual.)

The purpose of peel and shear tests is to evaluate seam strength and long-term performance. Shear strength measures the continuity of tensile strength through the seam and into the parent material. Peel adhesion measures the strength of the bond created by the welding process. Results of peel and shear tests must be recorded on a trial weld form.

Trial welds must be completed under conditions similar to those under which production seams will be welded. Trial welds must meet specified requirements for peel and shear, and the failure must be ductile or a film tearing bond (FTB) for a wedge weld. An FTB means the test specimen breaks at the edge of the outside of the seam, but not in the seam.

If at any time the CQA monitor believes that a welding apparatus is not functioning properly, a trial weld must be performed. If there are wide changes in temperature ( $\pm 30^{\circ}\text{F}$ .), humidity, or wind speed, another trial weld must be performed. The trial weld must be allowed to cool to ambient temperature before it is tested.

### 3.1.9 Production Welds

During geomembrane production welding operations, the CQA monitor must:

- Verify that the installer has the number of welding apparatuses and spare parts necessary to continuously perform the work
- Verify that equipment used for welding will not damage the geomembrane
- Verify that extrusion welders are purged before beginning a weld so that all heat-degraded extrudate is removed from the nozzle of the welder
- Verify that seam grinding is completed less than one hour before seam welding, and the upper sheet is beveled (extrusion welding only)
- Verify that ambient temperature measured 6 inches above the geomembrane surface is between  $40^{\circ}\text{F}$  and  $130^{\circ}\text{F}$
- Verify that ends of extrusion welds that are more than 5 minutes old are ground to expose new material before restarting a weld
- Verify that contact surfaces of the panels are clean and free of dust, grease, dirt, debris, and moisture before welding

- Verify that welds are free of dust, rocks, and other debris
- Verify that cross seams are ground to a smooth incline before welding (fusion welding only)
- Verify that all seams are overlapped a minimum of 3 inches or in accordance with manufacturer's recommendations, whichever is more stringent
- Verify that solvents or adhesives are not present in the seam area
- Verify that procedures used to temporarily hold the panels together do not damage the panels and do not preclude CQA testing
- Verify that panels are being welded in accordance with the plans and technical specifications
- Verify that there is no free moisture in the weld area.

### 3.1.10 Non-Destructive Seam Testing

The purpose of non-destructive geomembrane seam testing is to detect discontinuities or holes in the seams. Non-destructive geomembrane tests include vacuum and air pressure testing. Non-destructive testing must be performed over the entire length of the seam.

It is the installer's responsibility to perform all non-destructive testing as part of his QC program, record the results, and report the results to the CQA monitor. The CQA monitor's responsibility is to observe and independently document that the installer's QC testing is in compliance with the technical specifications, and to independently document repair of seam defects and panel defects that the installer detects.

Non-destructive testing procedures are described below:

- For welds tested by vacuum method, the weld is placed under suction using a vacuum box constructed with rigid sides, a transparent top for viewing the seams, a neoprene rubber gasket attached to the bottom of the rigid sides, a vacuum gauge on the inside, and a valve assembly attached to a vacuum hose connection. The box is placed over a seam section that has been thoroughly saturated with a soapy water solution (1 ounce soap to 1 gallon water). The rubber gasket on the bottom of the box must fit snugly against the soaped seam section of the panel to ensure a leak-tight seal. A vacuum pump is energized and the vacuum box pressure reduced to approximately 5 pounds per square inch gauge. Any pinholes, porosity, or non-bonded areas are detected by the appearance of soap bubbles in the vicinity of the defect. Dwell time must not be less than 10 seconds.
- Air pressure testing is used to test double seams that have an enclosed air space between them. Both ends of the air channel must be sealed. A pressure feed device, usually a needle equipped with a pressure gauge, is inserted into one end of the channel. Air is then pumped into the channel to a minimum specified pressure. A 5-minute relaxing period is allowed for the pressure to stabilize. The air chamber must sustain the pressure as specified in the technical specifications. Following a passed pressure test, the opposite end of the tested seam must be punctured to release the air. The pressure gauge must return to zero. If it does not, a blockage is likely in the seam channel. When a blockage is detected, it must be located, and the seam re-tested on both sides of the blockage. The penetration holes must be repaired after testing.

- Spark testing is used to check extrusion seams where the vacuum method is not feasible (i.e., around pipe boots or batten strip connections). Place 24-gauge copper wire within ¼-inch of the edge of extrusion seam or clamp seal. A low-amperage electric detector, 20,000 to 30,000 volt, with brush-type electrode is passed over the seam or clamp area. No visible spark should be detected. If a spark is detected, perform a repair.

During non-destructive testing, the CQA monitor must:

- Review technical specifications regarding test procedures and verify that all testing is completed in accordance with the technical specifications
- Verify that equipment operators are fully trained and qualified to perform their work
- Verify that test equipment meets project technical specifications
- Verify that the entire length of each seam is tested in accordance with the technical specifications
- Observe all testing and independently record results on the panel/seam log and the panel layout drawing
- Identify any failed areas detected by the installer by marking the area with a waterproof marker, verify that the installer is aware of the required repair, and record completion of the repair on the repair log
- Verify that all repairs are completed and tested in accordance with the project technical specifications
- Record non-destructive testing of repairs on the repair log.

### 3.1.11 Repairs

All repairs must be made in accordance with the technical specifications. The CQA monitor must locate required repairs and record completion of repair work on a repair log. Acceptable repair techniques include the following:

- Patching — used to repair large holes, tears, large panel defects, undispersed raw materials, welds, contamination by foreign matter, and “T” locations in panel welds.
- Extrusion — used to repair small defects in the panels and seams. In general, this procedure should be used for defects less than ½ inch in the largest dimension.
- Capping — used to repair failed welds or to cover seams where welds cannot be non-destructively tested.
- Removal — used to replace areas with large defects where the preceding methods are not appropriate. Also used to remove excess material (wrinkles, “fishmouths,” intersections, etc.) from the installed geomembrane. Areas of removal must be patched or capped.

### 3.1.12 Wrinkles

During placement of soil materials over geomembrane, temperature changes or creep may cause wrinkles to develop in the geomembrane. Any wrinkles that can fold over must be repaired either by cutting out excess material or, if possible, by allowing the geomembrane to contract by temperature

reduction. In no case can material be placed over the geomembrane that could result in the geomembrane folding. The CQA monitor must monitor geomembrane for wrinkles and notify the installer if wrinkles are being covered by soil. The CQA monitor is then responsible for documenting corrective action to remove the wrinkles.

### **3.1.13 Geomembrane Acceptance**

Geomembrane installation is accepted when the following conditions are met:

- The installation is finished
- All seams have been inspected and tested; and all required tests have been completed, the tests passed, and test data reviewed and approved
- All required installer- and manufacturer-supplied documentation has been received and reviewed
- All MQC and conformance testing documents that geomembrane meets specified requirements
- All as-built record drawings have been completed and verified by the CQA monitor to show the true panel dimensions, the locations of all seams, trenches, pipes, appurtenances, and repairs.

## **3.2 Geotextile and Geonet Quality Assurance**

### **3.2.1 Pre-Construction Submittal Review**

The geotextile and geonet supplier must provide the CQA organization with the following items for review and testing:

- Manufacturer's description (cut sheet) of the proposed geosynthetic documenting that it will meet or exceed specified requirements
- Written instructions for storage, handling, installation, seaming, and repair of the proposed geosynthetics.

Before shipment, the CQA organization must review the submittals for conformance to the technical specifications.

### **3.2.2 Conformance Testing**

Conformance testing will not be required for geotextile and geonet.

### **3.2.3 Delivery**

During delivery of geotextile and geonet, the CQA monitor must:

- Verify that equipment used to unload the rolls will not damage the geotextile and geonet
- Verify that rolls are wrapped in impermeable and opaque protective covers
- Verify that care is used to unload the rolls
- Verify that all documentation required by the technical specifications has been received

- Verify that each roll is marked or tagged with manufacturer's name, project identification, lot number, roll number, and roll dimensions, and that this information is documented on a geosynthetic receipt form
- Verify that materials are stored in a location that is protected from ultraviolet light exposure, precipitation, mud, dirt, dust, puncture, cutting, or any other damaging or deleterious conditions.

Damaged rolls must be rejected. If rejected, verify that rejected material is removed from the site or stored at a location separate from accepted rolls. Geotextile and geonet rolls that do not have proper manufacturer's documentation must also be stored at a separate location until all documentation has been received and approved.

### **3.2.4 Geotextile and Geonet Subsurface Preparation**

Before geotextile and geonet installation, the CQA monitor must verify that the underlying constructed layer is complete.

### **3.2.5 Geotextile and Geonet Placement and Seaming**

During geotextile and geonet seaming operations, the CQA monitor must:

- Observe the geotextile and geonet as it is deployed, record all defects and corrective actions (i.e., panel rejected, patch installed, etc.), and verify that corrective actions are performed in accordance with the technical specifications
- Verify that equipment used to install geotextile and geonet does not damage it during deployment
- Verify that crews working on the geotextile and geonet do not smoke, wear shoes that could damage the geotextile and geonet, or engage in activities that could damage the geotextile and geonet
- Verify that adjacent panels are overlapped and seamed in accordance with the technical specifications
- Verify that the geotextile and geonet was not exposed to direct sunlight or rain for more than the number of days recommended by the manufacturer
- Examine the geotextile and geonet after installation to ensure that no potentially harmful foreign objects are present.

The CQA monitor must inform both the construction manager and contractor if the above conditions are not met.

### **3.2.6 Geotextile and Geonet Repairs**

Where repairs are necessary, the CQA monitor must verify that the following methods are used:

- Patching — used to repair large holes, tears, and small defective areas.

- Removal — used to replace large defective areas where the preceding method is not appropriate.

## 4.0 DOCUMENTATION

The quality assurance plan depends on thorough monitoring and documentation of all construction activities. Therefore, the CQA engineer of record and CQA monitors must document that all quality assurance requirements have been implemented. Documentation must consist of daily record keeping, daily test reports and installation reports, non-conformance reports (if necessary), progress reports, design and specification revisions, test data summaries, and an FCR.

### 4.1 Daily Recordkeeping

At a minimum, daily records must consist of a daily record of construction progress, daily construction report, observation and test data sheets and, as needed, non-conformance/corrective measure reports. Daily records are made by the CQA monitors and the construction inspector. Copies of all reports must be submitted to the construction manager no less than weekly.

#### 4.1.1 Daily Record of Construction Progress

The daily field report must summarize ongoing construction activities and discussions with the contractor. At a minimum, the report must include the following:

- Date, project name, project number, and location
- A unique number for cross-referencing and document control
- Weather data
- A description of all ongoing construction for the day in the area of the monitor's responsibility
- An inventory of equipment used by the contractor
- Items of discussion, including the names of the parties involved in the discussion(s)
- A brief description of tests and observations, identified as passing or failing, or, in the event of failure, retest
- Areas of non-conformance/corrective actions, if any, (non-conformance/corrective action form to be attached)
- Summary of materials received and quality documentation
- Follow-up information on previously reported problems or deficiencies
- Record of any site visitors
- Signature of CQA monitor.

#### 4.1.2 Observation and Test Data Sheets

Observation and test data sheets should include the following information, as appropriate for the form being used.

- Date, project name, and location
- A unique number for cross-referencing and document control

- Weather data, as applicable
- A reduced-scale site plan showing sample and test locations
- Test equipment calibrations, if applicable
- A summary of test results identified as passing, failing, or, in the event of a failed test, retest
- Completed calculations
- Signature of the CQA monitor
- Signature of the peer reviewer, the CQA engineer of record, or CQA professional.

### 4.1.3 Non-Conformance Reports

In the event of a non-conformance event, a non-conformance verification report form must be included with the daily report. Procedures for implementing and resolving any non-conformance to the contract are outlined in Section 2.0 of this CQA Manual.

## 4.2 Photographs

Construction activities must be digitally photographed on a daily basis by the construction inspector and/or CQA monitor. Photographs are required to document construction progress and must include any significant problems encountered and corrective actions. The CQA monitor must identify each photograph with a number, a location, time, date, and photographer. The photographer should document the subject of the photograph in a photograph log.

## 4.3 Design and Specification Changes

Design and specification changes may be required during construction. Design and specification changes must only be made with written agreement of the design engineer of record, owner, and contractor. These changes must be made by change order to the contract. When change orders are issued, the construction manager must prepare them with technical input from the design engineer of record. The construction manager must distribute change orders for signature and execution to the required parties (e.g., contractor, construction manager, and other owner representatives as applicable).

## 4.4 Final Construction Report

At the completion of the project, the CQA engineer of record must submit an FCR documenting that the project has been constructed in compliance with the construction drawings, technical specifications, and design intent.

At a minimum, the report must contain:

- A summary of major construction activities
- A summary of laboratory and field test results
- Sampling and testing location drawings
- A description of significant construction problems and the resolution of these problems

- A description of changes from the construction drawings and technical specifications, and the justification for these changes
- As-built record drawings
- A statement of compliance with the drawings, technical specifications, and design intent, signed and stamped by a professional engineer registered in the State of Washington.

The as-built record drawings must accurately locate the constructed location of all work items. The CQA engineer of record and CQA monitors must review and verify that as-built drawings are correct. As-built drawings must be included in the report.

## 5.0 REFERENCES

Landau. 2023. Preliminary Engineering Design Drawings and Specifications: Tacoma Landfill, Tacoma Landfill Flare Station Cap Repairs.

## **PART V**

### **STATE PREVAILING WAGE RATES & GENERAL REQUIREMENTS**

## PREVAILING WAGE RATES

This project requires prevailing wages under [39.12 RCW](#). Any worker, laborer, or mechanic employed in the performance of any part of the work shall be paid not less than the applicable prevailing rate of wage.

The project site is located in Pierce County.

The effective date for prevailing wages on this project will be the **submittal deadline** with these exceptions:

- a. If the project is not awarded within six months of the submittal deadline, the award date is the effective date.
- b. If the project is not awarded pursuant to a competitive solicitation, the date the contract is executed is the effective date.
- c. Janitorial contracts follow WAC 296-127-023.

Except for janitorial contracts, these rates shall apply for the duration of the contract unless otherwise noted in the solicitation.

Look up prevailing rates of pay, benefits, and overtime codes from this link:

<https://secure.lni.wa.gov/wagelookup/>

## REQUIRED FILINGS

The contractor and all subcontractors covered under [39.12 RCW](#) shall submit to the Department of Labor and Industries (L&I) for work provided under this contract:

1. A Statement of Intent to Pay Prevailing Wages must be filed with and approved by L&I upon award of contract.
2. An Affidavit of Wages Paid must be filed with and approved by L&I upon job completion.

Payments cannot be released by the City until verification of these filings are received by the engineer. Additional information regarding these filings can be obtained by calling the Department of Labor & Industries, Prevailing Wage at 360-902-5335, <https://www.lni.wa.gov/> or by visiting their MY L&I account.

## **PART VI**

## **INSURANCE**



# CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

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This Insurance Requirements shall serve as an attachment and/or exhibit form to the Contract. The Agency entering a Contract with City of Tacoma, whether designated as a Supplier, Contractor, Vendor, Proposer, Bidder, Respondent, Seller, Merchant, Service Provider, or otherwise referred to as "Contractor".

## 1. GENERAL REQUIREMENTS

The following General Requirements apply to Contractor and to Subcontractor(s) performing services and/or activities pursuant to the terms of this Contract. Contractor acknowledges and agrees to the following insurance requirements:

- 1.1. Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the City of Tacoma.
- 1.2. Contractor shall keep in force during the entire term of the Contract, at no expense to the City of Tacoma, the insurance coverage and limits of liability listed below and for Thirty (30) calendar days after completion of all work required by the Contract, unless otherwise provided herein.
- 1.3. Liability insurance policies, except for Professional Liability and Workers' Compensation, shall:
  - 1.3.1. Name the City of Tacoma and its officers, elected officials, employees, and agents as **additional insured**
  - 1.3.2. Be considered primary and non-contributory for all claims with any insurance or self-insurance or limits of liability maintained by the City of Tacoma
  - 1.3.3. Contain a "Waiver of Subrogation" clause in favor of City of Tacoma
  - 1.3.4. Include a "Separation of Insureds" clause that applies coverage separately to each insured and additional insured
  - 1.3.5. Name the "City of Tacoma" on certificates of insurance and endorsements and not a specific person or department
  - 1.3.6. Be for both ongoing and completed operations using Insurance Services Office (ISO) form CG 20 10 04 13 and CG 20 37 04 13 or the equivalent
  - 1.3.7. Be satisfied by a single primary limit or by a combination of a primary policy and a separate excess umbrella
- 1.4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements below. Verification of coverage shall include:
  - 1.4.1. An ACORD certificate or equivalent
  - 1.4.2. Copies of requested endorsements
- 1.5. Contractor shall provide to City of Tacoma Procurement & Payable Division, prior to the execution of the Contract, Certificate(s) of Insurance and endorsements from the insurer certifying the coverage of all insurance required herein. Contract or Permit number and the City of Tacoma Department must be shown on the Certificate of Insurance.
- 1.6. A renewal Certificate of Insurance shall be provided electronically prior to coverage



# CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

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expiration via email sent annually to [coi@cityoftacoma.org](mailto:coi@cityoftacoma.org).

- 1.7. Contractor shall send a notice of cancellation or non-renewal of this required insurance within Thirty (30) calendar days to [coi@cityoftacoma.org](mailto:coi@cityoftacoma.org).
- 1.8. "Claims-Made" coverages, except for pollution coverage, shall be maintained for a minimum of three years following the expiration or earlier termination of the Contract. Pollution coverage shall be maintained for six years following the expiration of the Contract. The retroactive date shall be prior to or coincident with the effective date of the Contract.
- 1.9. Each insurance policy must be written by companies licensed or authorized (or issued as surplus line by Washington surplus line broker) in the State of Washington pursuant to RCW 48 with an (A-) VII or higher in the A.M. Best key rating guide.
- 1.10. Contractor shall not allow any insurance to be cancelled, voided, suspended, or reduced in coverage/limits, or lapse during any term of this Contract. Otherwise, it shall constitute a material breach of the Contract.
- 1.11. Contractor shall be responsible for the payment of all premiums, deductibles and self-insured retentions, and shall indemnify and hold the City of Tacoma harmless to the extent such a deductible or self-insured retained limit may apply to the City of Tacoma as an additional insured. Any deductible or self-insured retained limits in excess of Twenty Five Thousand Dollars (\$25,000) must be disclosed and approved by City of Tacoma Risk Manager and shown on the Certificate of Insurance.
- 1.12. City of Tacoma reserves the right to review insurance requirements during any term of the Contract and to require that Contractor make reasonable adjustments when the scope of services changes.
- 1.13. All costs for insurance are included in the initial Contract and no additional payment will be made by City of Tacoma to Contractor.
- 1.14. Insurance coverages specified in this Contract are not intended and will not be interpreted to limit the responsibility or liability of Contractor or Subcontractor(s).
- 1.15. Failure by City of Tacoma to identify a deficiency in the insurance documentation or to verify coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- 1.16. If Contractor is a government agency or self-insured for any of the above insurance requirements, Contractor shall be liable for any self-insured retention or deductible portion of any claim for which insurance is required. A certification of self-insurance shall be attached and incorporated by reference and shall constitute compliance with this Section.



# CITY OF TACOMA

## INSURANCE REQUIREMENTS FOR CONTRACTS

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### 2. SUBCONTRACTORS

It is Contractor's responsibility to ensure that each subcontractor obtain and maintain adequate liability insurance coverage that applies to the service provided. Contractor shall provide evidence of such insurance upon City of Tacoma's request. Failure of any subcontractor to comply with insurance requirements does not limit Contractor's liability or responsibility.

### 3. REQUIRED INSURANCE AND LIMITS

The insurance policies shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve Contractor from liability in excess of such limits.

#### 3.1 Commercial General Liability Insurance

Contractor shall maintain Commercial General Liability Insurance policy with limits not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) annual aggregate. This policy shall be written on ISO form CG 00 01 04 13 or its equivalent and shall include product liability especially when a Contract is solely for purchasing supplies. It includes Products and Completed Operations for three years following the completion of work related to performing construction services. It shall be endorsed to include: A per project aggregate policy limit (using ISO form CG 25 03 05 09 or equivalent endorsement)

#### 3.2 Commercial (Business) Automobile Liability Insurance

Contractor shall maintain Commercial Automobile Liability policy with limits not less than One Million Dollars (\$1,000,000) each accident for bodily injury and property damage and bodily injury and property damage coverage for owned (if any), non-owned, hired, or leased vehicles. Commercial Automobile Liability Insurance shall be written using ISO form CA 00 01 or equivalent. Contractor must also maintain MCS 90 and CA 99 48 endorsements or equivalent if "Pollutants" are to be transported unless in-transit Pollution coverage is covered under required Contractor's Pollution Liability Insurance.

#### 3.3 Workers' Compensation

Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington, as well as any other similar coverage required for this work by applicable federal laws of other states. Contractor must comply with their domicile State Industrial Insurance laws if it is outside the State of Washington.

#### 3.4 Employers' Liability Insurance

Contractor shall maintain Employers' Liability coverage with limits not less than One Million Dollars (\$1,000,000) each employee, One Million Dollars (\$1,000,000) each accident, and One Million Dollars (\$1,000,000) policy limit.

#### 3.5 Pollution Liability Insurance

Contractor shall maintain Pollution Liability or Environmental Liability Insurance with limits not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) in the aggregate. Coverage shall include investigation and defense costs for bodily injury and property damage, loss of use of damaged or destroyed property, Natural Resource Damage, and Hazardous Substance Removal. Such coverage shall provide both on-site and off-site cleanup costs, cover gradual and sudden pollution, and include in its scope of coverage the City of Tacoma damage claims for loss arising out of Contractor's work.



# CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

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## 3.6 Other Insurance

Other insurance may be deemed appropriate to cover risks and exposures related to the scope of work or changes to the scope of work required by City of Tacoma. The costs of such necessary and appropriate Insurance coverage shall be borne by Contractor.