Set No. _____

Specifications, Proposal,
and Contract Documents for:

TREND LIFT STATION PROJECT

CIP NO. SSC-0600000

Job No. 34-24-PW

City of Kirkland
Department of Public Works
123 Fifth Avenue
Kirkland, Washington 98033

CITY OF KIRKLAND
DEPARTMENT OF PUBLIC WORKS

TREND LIFT STATION PROJECT
CIP NO. SSC-0600000
JOB NO. 34-24-PW

Certificate of Engineer:
The Special Provisions and drawings contained herein have been prepared by or under the direction of the undersigned, whose seal as a Professional Engineer licensed to practice in the State of Washington, is affixed below.

Rodney Langer, P.E.
Project Manager

Approved for Construction:

Rob English, P.E.
Capital Division Manager

CITY OF KIRKLAND
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INVITATION TO BID

City of Kirkland

INVITATION TO BID

Notice is hereby given that the City of Kirkland will receive sealed bids in the office of the Purchasing Agent, City Hall, 123 Fifth Avenue, Kirkland, Washington, at 2:00 P.M., local time on September 23, 2025, for the project hereinafter referred to as:

Trend Lift Station Project
CIP NO. SSC-0600000
PROJECT JOB NO. 34-24-PW

At said time all bids will be opened and publicly read aloud. Each bid shall be accompanied by a bid proposal deposit in the form of a cashier's check or a bond issued on a form acceptable to your surety made payable to the City of Kirkland for a sum of not less than five percent (5%) of the total bid amount. No bid shall be considered unless accompanied by such bid proposal deposit. Incomplete proposals and proposals received after the time stated above will not be considered. Faxed or emailed responses are not acceptable.

The work to be performed under these specifications consists of furnishing all labor, tools, materials, and equipment necessary for constructions of the **Trend Lift Station Project.**

Specific work includes, but is not limited to the removal of existing pumps, piping, fittings, power and control conduit and wiring, selective sections of a concrete wet well and dry well, appurtenances, sewer bypass pumping, and installation of pumps in a modified wet well complete with new power and control wiring, grout modification, a precast concrete valve vault, davit crane bases, electrical transformer and power panels, landscaping, piping, fittings, appurtenances, and all related Work including a tree removal, all in accordance with the Contract Plans, these Contract Special Provisions, and the Standard Specifications.

The estimated cost for this project is in the range of $1,000,000 to $1,250,000.

The City will not sell bid packages. Plans, specifications, and addenda may be viewed and obtained online at *www.bxwa.com*. Click on: "Posted Projects"; "Public Works", "City of Kirkland". The Bidders List is maintained by the Builder's Exchange of Washington, Inc. Registration for the bidder's list may be made online, by phoning (425) 258-1303, or at Builder's Exchange of Washington located at 2607 Wetmore Ave, Everett, WA.

Questions regarding this project shall be submitted in writing to Craig Martin via email clmartin@kirklandwa.gov. Questions via phone will not be accepted. Bidders shall submit questions no later than 4:00 P.M. on September 12, 2025.

The City reserves the right to reject any and all bids, and to waive any informalities in the bidding, and to make the award to the lowest, responsive, responsible bidder as best serves the interests of the City.

No bids may be withdrawn within forty-five (45) after the actual date of the bid opening.

Published: Daily Journal of Commerce – August 28, 2025; September 4, 2025

GENERAL INFORMATION, PROPOSAL, & CONTRACT

City of Kirkland

CITY OF KIRKLAND

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CITY OF KIRKLAND
INFORMATION FOR BIDDERS

Bidders must bid on all items contained in the proposal.

The omission or deletion of any bid item will be considered non-responsive and shall be cause for rejection of the bid.

Submit your proposal on the Bid Proposal and other forms which are enclosed, or make a copy of the required forms and submit these documents.

The following forms must be executed in full *with* submittal of the bid:

1. BIDDER RESPONSIBILITY CRITERIA CHECKLIST
2. SUBCONTRACTOR RESPONSIBILITY CRITERIA CHECKLIST
3. PROPOSAL

   The lump sum or unit prices must be shown in the spaces provided on the bid schedule.

   Show total bid price in both words and figures on the Proposal.

   The Proposal form must be completed in full, signed and dated.

4. BID BOND

   A surety issued bid bond must be executed by the bidder and its surety company. The amount of the bid bond shall be not less than five percent (5%) of the total amount bid and may be shown in dollars or on a percentage basis. (A cashier's check payable to the City of Kirkland and issued for an amount not less than 5% of the total bid may be submitted in lieu of a bid bond.)

5. NONCOLLUSION AFFIDAVIT - Notarized
6. STATEMENT OF BIDDER'S QUALIFICATIONS

   This form must be filled in and signed. The owner reserves the right to check all statements and to judge the adequacy of the bidder's qualifications.

7. SUBCONTRACTOR IDENTIFICATION LIST

   This form must be completed in compliance with RCW 39.30.060 if the estimate exceeds $1,000,000.

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

1. CONTRACT

   This agreement is to be executed by the successful bidder.

2. PERFORMANCE AND PAYMENT BOND

   To be executed by the successful bidder and its surety company.

3. CONTRACTOR'S DECLARATION OF OPTION FOR MANAGEMENT OF STATUTORY RETAINED PERCENTAGE; RETAINED PERCENTAGE ESCROW AGREEMENT

   To be executed by the successful bidder based on bidder's selection of option.

4. CERTIFICATES OF INSURANCE

   To be executed by the successful bidder and by an acceptable insurance company. The City of Kirkland must be named as an additional insured.

5. STATEMENT(S) OF INTENT TO PAY PREVAILING WAGES

   Affidavit certifying all employees of Contractor and Subcontractor shall be paid no less than the Prevailing Wage Rate(s) as determined by the Industrial Statistician of the Washington State Department of Labor and Industries.

SPECIAL NOTE: Prior to commencing work, the contractor and all subcontractors must have applied and paid for a City of Kirkland business license

CITY OF KIRKLAND
BIDDER RESPONSIBILITY CRITERIA

It is the intent of City to award a contract to the low responsible bidder. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. The bidder may be required by the City to submit documentation demonstrating compliance with the criteria. The bidder must:

☐ 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. Have:

a. 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;

☐ 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3). **Meet responsibility criteria in RCW 39.04.350**

☐ 5. Until December 31, 2017, not have violated more than one time the off-site, prefabricated, non-standard, project specific items reporting requirements of RCW 39.04.370.

☐ 6. For public works projects subject to the apprenticeship utilization requirements of 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 first date of advertising for the project.

☐ 7. Have completed five projects of a similar nature within the past 10 years, with a contract amount of a minimum of $350,000 per project.

CITY OF KIRKLAND
SUBCONTRACTOR RESPONSIBILITY CRITERIA

☐ A. The Contractor shall include the language of this 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. 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 section apply to all subcontractors regardless of tier.

☐ B. 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 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. Have:

a) Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RC
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). **Meet responsibility criteria in RCW 39.04.350**

☐ 5. Until December 31, 2017, not have violated more than one time the off-site, prefabricated, non-standard, project specific items reporting requirements of RCW 39.04.370.

☐ 6. For public works projects subject to the apprenticeship utilization requirements of 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 first date of advertising for the project.

CITY OF KIRKLAND
BID PROPOSAL

Trend Lift Station Project
CIP NO. SSC0600000
JOB NO. 34-24-PW

To: Director of Finance
City of Kirkland
123 Fifth Avenue
Kirkland, Washington 98033

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this proposal are those named herein; that this proposal is in all respects fair and without fraud; that it is made without collusion with any official or employee of the City of Kirkland, hereinafter called the Owner; and that the proposal is made without any connection or collusion with any person making another proposal on this contract.

The bidder further declares that it has carefully examined the contract documents for the construction of the project; that it has personally inspected the site; that it has satisfied itself as to the quantities involved, including materials and equipment and conditions of work involved, including the fact that the description of the quantities of work materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the contract documents; and that this proposal is made according to the provisions and under the terms of the contract documents, which documents are hereby made a part of this proposal.

The bidder further agrees that it has exercised its own judgment regarding the interpretation of subsurface information and has utilized all data which it believes pertinent from the engineer-architect, owner, and other sources in arriving at its conclusions.

The bidder agrees to hold its bid proposal open for 45 days after the actual date of bid opening and to accept the provisions of the Instructions to Bidders regarding disposition of bid bond.

The bidder agrees that if this proposal is accepted, it will, within ten (10) calendar days after notification of acceptance, execute the contract with the Owner in the form of contract included in the contract documents, and will, at the time of execution of the contract, deliver to the Owner the Performance and Payment Bond and all Certificates of Insurance required therein, and will, to the extent of its proposals, furnish all machinery, tools, apparatus, and other means of construction and do the work in the manner, in the time, and according to the methods as specified in the contract documents and required by the engineer or other project manager designated thereunder.

The bidder further agrees, if awarded the contract, to begin work within ten (10) calendar days after the date of the execution of the contract and to complete the construction within the time specified in Section 1-08.5 of the Special Provisions.

In the event the bidder is awarded the contract and shall fail to complete the work within the time limit or extended time limit agreed upon as more particularly set forth in the contract documents, liquidated damages shall be paid to the Owner per the specifications contained in the contract documents.

The bidder further proposes to accept as full payment for the work proposed herein, the amounts computed under the provisions of the contract documents and based upon the lump sum and unit price amounts entered by the bidder for the various bid items included in the Bid Schedule. The bidder further agrees the lump sum and unit prices entered for the various bid items included in the Bid Schedule include all use taxes, overhead, profit, bond premiums, insurance premiums and all other miscellaneous and incidental expenses as well as all costs of materials, labor, tools and equipment required to perform and complete the work.

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

The undersigned bids and agrees to complete all construction of the **Trend Lift Station Project; JOB NO. 34-24-PW** for the following:

Total Computed Price *(in figures)*: $_____

Washington State Sales Tax 10.3% *(in figures)*: $_____

Total Bid *(in figures)*: $_____

Total Bid *(in words)*: _____

_____

Receipt of Addenda No(s). _____ is hereby acknowledged.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct:

CONTRACTOR (Firm Name)	Location or Place Executed: (City, State)
By	Name and title of person signing
(Indicate whether Contractor is Partnership, Corporation, or Sole Proprietorship)	Date
Washington State Contractor's Registration Number	Contractor's Industrial Insurance Account Number

MUST BE SUBMITTED WITH PROPOSAL

Employment Security Identification Number	Uniform Business Identification (UBI) Number

Contractor's Address:

	Telephone Number
	Fax Number
	EMAIL

** Bid proposal to be submitted in a **sealed envelope** marked "**Bid Enclosed**" for **Trend Lift Station Project, JOB NO. 34-24-PW.**

CITY OF KIRKLAND
BID SCHEDULE

Trend Lift Station Project
JOB NO. 34-24-PW

Note: Unit prices for all items, all extensions, and the total amount of the bid must be shown. All entries must be typed or entered in ink.

Item No.	Item Description	Spec Ref.	Est. Qty.	Unit	Unit Price	Amount
1	Record Drawings (Minimum Bid $5,000)	1-05	1	LS		
2	SPCC Plan	1-07	1	LS		
3	Force Account	1-09	1	LS	$40,000	$40,000
4	Mobilization	1-09(7)	1	LS		
5	Project Temporary Traffic Control Labor (Minimum Bid $5,000)	1-10	1	LS		
6	Sawcutting Pavement - up to 8 In. Thick	2-02	360	LF		
7	Decommission Monitoring Well	2-02	1	EA		
8	Gravel Borrow Incl. Haul	2-03	100	TN		
9	Controlled Density Fill	2-09	10	CY		
10	Crushed Surfacing Top Course	4-04	100	TN		
11	Crushed Surfacing Base Course	4-04	30	TN		
12	HMA, CL 1/2" PG 64-22 Trench and Excavation Restoration (Temporary)	5-04	30	TN		
13	HMA, CL 1/2" PG 64-22 Trench and Excavation Patch (Permanent)	5-04	50	TN		
14	Planing Bituminous Pavement	5-04	240	SY		
15	HMA, CL 1/2" PG 64-22 2" Overlay	5-04	30	TN		
16	CL 50 DI Storm Drain 12 In. Diam.	7-04	45	LF		
17	Adjust Manhole	7-05	2	EA		
18	Catch Basin Type 1	7-05	2	EA		
19	Excavation Safety Systems	7-08	1	LS		
20	Service Connection 1 In. Diam	7-15	1	EA		
21	Erosion/Water Pollution Control	8-01	1	LS		
22	Property Restoration	8-02	1	LS		
23	Remove and Replace Cement Conc. Traffic Curb and Gutter	8-04	30	LF		
24	Remove and Replace Cement Conc. Sidewalk	8-14	3	SY		
25	All Other Work	8-26	1	LS		

TOTAL COMPUTED PRICE: $ _____

BID DEPOSIT

Herewith find deposit in the form of a cashier's check or certified check in the amount of $_____which amount is not less than five percent (5%) of the total bid.

SIGN HERE_____

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the City of Kirkland, 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

_____ _____
Project Name Job Number

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:

Note: If a Bid Bond is provided, it must be accompanied by a power of attorney which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this Bid Bond.

MUST BE SUBMITTED WITH PROPOSAL

CITY OF KIRKLAND
NONCOLLUSION AFFIDAVIT
Trend Lift Station Project
CIP NO. SSC0600000
JOB NO. 34-24-PW

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

The undersigned, being duly sworn, on oath deposes and says that the person(s), firm, association, partnership or corporation herein named has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.

_____ _____
Firm Name Authorized Signature

_____
Type Name

_____
Title

Sworn to before me, this _____ day of _____, 20__.

_____
Notary Public in and for the State of Washington
Residing at _____
My Commission Expires _____

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., ET. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

MUST BE SUBMITTED WITH PROPOSAL

CITY OF KIRKLAND
STATEMENT OF BIDDER'S QUALIFICATIONS

Contractor Name: _____ Contact: _____

Business Address: _____

Business phone: _____ Fax: _____

Number of years the Contractor has been engaged in the construction business under the present firm name: _____

Describe the general character of work performed by your company: _____

_____

List five projects of a similar nature which Contractor has completed within the last 10 years with a minimum contract amount of $350,000 per project. Include contract amount and contact information for references:

Project Name	Amount	Owner/Agency	Contact	Phone	Year Completed

List major equipment anticipated to be used on this project; indicate whether Contractor-owned or to be leased from others: _____

_____

_____

_____

Bank reference(s): _____

Washington State Contractor Registration No.: _____

Uniform Business Identification No.: _____

I certify that other contracts now in progress or hereafter obtained will not interfere with timely performance of the City of Kirkland project should I become the successful bidder.

Authorized Signature: _____

Print Name: _____ Title: _____

MUST BE SUBMITTED WITH PROPOSAL

CITY OF KIRKLAND
SUBCONTRACTOR IDENTIFICATION FOR CONTRACTS ESTIMATED TO BE IN EXCESS OF ONE MILLION DOLLARS ($1,000,000.00)

RCW 39.30.060 requires the following:

> "(1) Every invitation to bid on a prime contract that is expected to cost one million dollars or more for the construction, alteration, or repair of any public building or public work of the state or a state agency or municipality as defined under RCW 39.04.010 … shall require each prime contract bidder to submit:
>
> (a) Within one hour after the published bid submittal time, the names of the subcontractors with whom the bidder, if awarded the contract, will subcontract for performance of the work of: HVAC (heating, ventilation, and air conditioning); plumbing as described in chapter 18.106 RCW; and electrical as described in chapter 19.28 RCW, or to name itself for the work; or
>
> (b) Within forty-eight hours after the published bid submittal time, the names of the subcontractors with whom the bidder, if awarded the contract, will subcontract for performance of the work of structural steel installation and rebar installation.
>
> The prime contract bidder shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the prime contract bidder must indicate which subcontractor will be used for which alternate. Failure of the prime contract bidder to submit as part of the bid the names of such subcontractors or to name itself to perform such work or the naming of two or more subcontractors to perform the same work shall render the prime contract bidder's bid non-responsive and, therefore, void."

Each bidder shall submit a list of:

1. HVAC, plumbing, electrical, structural steel installation, and rebar installation subcontractors; and

2. The specific items of work those subcontractors will perform on the contract; and

3. The specific items of work that will be performed by the bidder on the contract relating to work described in RCW 39.30.060.

MUST BE SUBMITTED WITH PROPOSAL

CITY OF KIRKLAND
SUBCONTRACTOR IDENTIFICATION LIST

*REQUIRED IF ESTIMATE AMOUNT EXCEEDS $1,000,000 (*Reference RCW 39.30.060 RCW*)

Proposed Subcontractors and items of work to be performed:

Subcontractor Name: _____

Item Numbers: _____

_____

_____

_____

Subcontractor Name: _____

Item Numbers: _____

_____

_____

_____

Subcontractor Name: _____

Item Numbers: _____

_____

_____

_____

Subcontractor Name: _____

Item Numbers: _____

_____

_____

_____

Subcontractor Name: _____

Item Numbers: _____

_____

_____

_____

- make additional pages if necessary -

Work to be performed by Prime Contractor:

Item Numbers: _____

_____

_____

_____

_____

CITY OF KIRKLAND
BIDDER'S CHECKLIST

1. Have you reviewed the Bidder Responsibility and Subcontractor Responsibility Criteria?
2. Have you enclosed a bid bond or certified check with your bid? (Must be at least 5% of the total amount bid)
3. Have you entered a bid amount for all items and all schedules?
4. Do the written amounts of the proposal agree with the amounts shown in the figures?
5. Have you acknowledged receipt of addenda?
6. Has the proposal been properly completed and signed?
7. Have you completed the Statement of Bidder's Qualifications?
8. Have you completed the City of Kirkland Non-collusion Affidavit?
9. Have you completed the Subcontractor Identification List? (This is to be completed if the estimate amount exceeds $1,000,000.)
10. Bid proposal to be submitted in a sealed envelope marked "Bid Enclosed" for:

CITY OF KIRKLAND

TABLE OF CONTENTS – CONTRACT DOCUMENTS

CITY OF KIRKLAND
PUBLIC WORKS AGREEMENT
Version:063020
Trend Lift Station Project
JOB NO. 34-24-PW

This agreement is made and entered into this _____day of_____, 20____, by and between **CONTRACTOR NAME**, hereinafter called the "Contractor" and the City of Kirkland, hereinafter called the "City."
W I T N E S S E T H:

Whereas, pursuant to the invitation of the City extended through an officially published "Invitation to Bid," the Contractor did, in accordance therewith, file with the City a proposal containing an offer which was invited by said notice, and

Whereas, the City has heretofore determined that said offer was the lowest responsible bid submitted; now, therefore, it is agreed:

Section 1. That Contractor shall comply in every way with the requirements of those certain specifications entitled: "Trend Lift Station Project, Job No. 34-24-PW"

The further terms, conditions and covenants of the contract are set forth in the following contract documents which are hereby made a part of this agreement by actual attachment or by this reference thereto as follows:

A. Invitation to Bid, as published by the City.

B. Specifications prepared for this project by the City and named above by title.

C. Detailed Plans listed and described in said Specifications, together with those which may be issued as supplements thereof.

D. The bid proposals submitted by the Contractor as to those items and/or alternatives accepted by the City.

E. Any written change orders, additions or deletions, if any, issued by the City, pursuant to this agreement.

F. Indemnification and insurance provisions included in the project documents shall apply to this agreement.

Section 2. In consideration of faithful compliance with the terms and conditions of this agreement, whether set forth herein or incorporated by reference, the Owner shall pay to the Contractor, at the times and in the manner provided in said specifications, the total sum of _____ dollars **($**_____**)** which sum is subject, however, to increase or decrease in such proportion as the quantities named in said proposal are so changed, all as in said specifications and proposal provided.

In witness whereof, said Contractor and said City have caused this agreement to be executed on the day and year first written above.

_____
CONTRACTOR (Firm Name)

Signature of authorized officer	Name and title of officer (print or type)
WA Contractor's Registration Number	Industrial Insurance Account Number
Uniform Business Identification (UBI) Number	Phone Number

(For corporations, LLC's and other legal entities)

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____, to me known to be the _____ of _____, the legal entity that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said legal entity, for the uses and purposes therein set forth, and on oath stated that he/she was authorized to sign said instrument.

Given under my hand and official seal this _____ day of _____, 2____.

_____
Print Name: _____
NOTARY PUBLIC in and for the State of
Washington, residing _____
Commission expires: _____

(For individuals and d/b/a's)

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____ and _____ to me known to be the individual(s) described herein and who executed the foregoing instrument, and acknowledged that he/she/they signed the same as his/her/their free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this _____ day of _____, 2____.

_____
Print Name: _____
NOTARY PUBLIC in and for the State of
Washington, residing _____
Commission expires: _____

CITY OF KIRKLAND

BY: _____
Tracey Dunlap, Deputy City Manager

PERFORMANCE BOND

Surety to have an A.M. Best rating of A-:VII or better.

Bond No. _____

KNOW ALL PERSONS BY THESE PRESENTS, that **CONTRACTOR NAME**, as Principal, and _____, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of _____, (insert Surety's state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) in the sum of _____ dollars **($_____)**, lawful money of the United States of America, plus the total amount of extra orders issued by the City to the Principal pursuant to the terms of the Contract referred to in the next succeeding paragraph hereof, for the payment whereof Principal and Surety bind ourselves, and our heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has been awarded, and is about to enter into, a written Contract with the City for **Trend Lift Station Project**, **Job #34-24-PW**, which is hereby made a part of this bond as if fully set forth herein;

NOW, THEREFORE, the condition of this bond is such that:

1. If the Principal shall completely and faithfully perform all of its obligations under the Contract, including any warranties required thereunder, and all modifications, amendments, additions, and alterations thereto, including modifications which increase the contract price or time for completion, with or without notice to the surety; and
2. If the Principal shall indemnify and hold the City harmless from any and all losses, liability, damages, claims, judgments, liens, costs, and fees of any type that the City may be subject to because of the failure or default of the Principal in the performance of any of the terms, conditions, or obligations of the Contract, including all modifications, amendments, additions, and alterations thereto, and any warranties required thereunder;

THEN THIS obligation shall be null and void; otherwise to remain in full force and effect. If the City shall declare Principal to be in default of the Contract, and shall so notify Surety, Surety shall, within a reasonable time which shall not exceed 14 days, except for good cause shown, notify the City in writing of the manner in which surety will satisfy its obligations under this Bond.

Nonpayment of the Bond premium will not invalidate this Bond nor shall the City be obligated for the payment thereof. The Surety hereby waives notice of any modification of the Contract or extension of time made by the City.

Signed this _____ day of _____, 2____.

Principal:	_____	Surety:	_____
By:	_____	By:	_____
Title:	_____	Title:	_____
Address:	_____	Address:	_____
City/Zip:	_____	City/Zip:	_____
Telephone: ( )	_____	Telephone: ( )	_____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.

LABOR, MATERIAL AND TAXES PAYMENT BOND

Surety to have an A.M. Best rating of A-:VII or better.

Bond No. _____

KNOW ALL PERSONS BY THESE PRESENTS, that, **CONTRACTOR NAME**, as Principal, and _____, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of _____ (insert Surety's state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) for the use and benefit of claimants as hereinafter defined, in the sum of **_____ Dollars ($_____),** lawful money of the United States of America, plus the total amount of any extra orders issued by the City, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has been awarded, and is about to enter into, a Contract with City of Kirkland for **Trend Lift Station Project, Job #34-24-PW**, which contract is by this reference made a part hereof;

WHEREAS, the contract is a public works contract, subject to the provisions of RCW Titles 39 and 60;

NOW, THEREFORE, the conditions of this obligation are such that, if the Principal shall promptly make payment to all claimants as hereinafter defined, for (a) all labor and material used or reasonably required for use in the performance of the contract and (b) all taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions: A claimant is defined as and includes (a) a person claiming to have supplied labor or materials for the prosecution of the work provided for in the contract, including any person having direct contractual relationship with the contractor furnishing the bond or direct contractual relationship with any subcontractor, or an assignee of such person, (b) the state with respect to taxes incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due and (c) any other person or entity as allowed or required by law.

3. The Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full prior to Final Acceptance of the project, or materials were furnished by such claimant, has an action on this bond for such sum or sums as may be justly due claimant, and may have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit or action.

(Form continues on next page)

4. No suit or action shall be commenced hereunder by any claimant (except the state with respect to taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due) unless the claimant has sent the written notice required under RCW Title 39 to the Principal and to the City's Purchasing Agent by registered or certified mail, or by hand delivery, no later than 30 days after Final Acceptance of the Project.

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 mechanics' liens which may be filed of record against the improvement, whether or not claim for the amount of such lien be presented under and against this bond.

The Surety hereby waives notice of any modification of the contract or extension of time made by the City.

Signed this _____ day of _____ , 2____

Principal: _____	Surety: _____
By: _____	By: _____
Title: _____	Title: _____
Address: _____	Address: _____
City/Zip: _____	City/Zip: _____
Telephone: ( ) _____	Telephone: ( ) _____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.

END OF LABOR, MATERIAL AND TAXES PAYMENT BOND FORM

CITY OF KIRKLAND
CONTRACTOR'S DECLARATION OF OPTION FOR MANAGEMENT OF STATUTORY RETAINED PERCENTAGE
Trend Lift Station Project
JOB NO. 34-24-PW

Monies reserved under provisions of Chapter 60.28 RCW, at the option of the Contractor, shall be:

Select One

[ ] (1) Retained in a fund by the City. No interest will be earned on the retained percentage amount under this election.

[ ] (2) Retainage Bond

[ ] (3) Placed in escrow with a bank or trust company by the City. When the monies reserved are to be placed in escrow, the City will issue a check representing the sum of the monies reserved payable to the bank or trust company and the Contractor jointly. Such check shall be converted into bonds and securities chosen by the Contractor and approved by the City and the bonds and securities held in escrow. (For the convenience of those Contractors choosing option (3) a City approved Form of Escrow Agreement is included on the next page and should be completed and submitted with the executed contract.)

The Contractor in choosing option (3) agrees to assume full responsibility to pay all costs which may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retained percentages in securities.

[ ] (4) Deposited by the City in an interest-bearing account at the FDIC insured bank currently providing contracted banking services to the City of Kirkland. Interest on such account shall be paid to the contractor. Any fees incurred shall be the responsibility of the contractor.

CONTRACTOR:

Signature: _____

Print or Type Name: _____

Title: _____

Date: _____

RETAINAGE BOND
RETURN THIS FORM IF RETAINAGE BOND OPTION IS SELECTED

Contract Title	Trend Lift Station Project
Contract Number	34-24-PW
Contractor Name	

The Undersigned, _____, existing under and by virtue of the laws of the State of Washington and authorized to do business in the State of Washington as Principal, and _____ organized and existing under the laws of the State of _____ and authorized to transact business in the State of Washington as Surety, are jointly and severally held and bound unto_____, hereinafter called Obligee, and are similarly held and bound unto the beneficiaries of the trust fund created by RCW 60.28, in the penal sum of _____
($_____), Which is 5% of the principal's price on Contract ID_____.

WHEREAS, on the _____ day of _____, 2____, the said principal herein executed a contract with the Obligee, for the Contract specified above, Contract ID Number_____.

WHEREAS, said contract and RCW 60.28 require the Obligee to withhold from the Principal the sum of ___% from monies earned on estimates during the progress of the construction, herein after referred to as earned retained funds.

NOW WHEREAS, Principal has requested that the Obligee not retain any earned retained funds as allowed under RCW 60.28.

NOW THEREFORE, the condition of the obligation is such that the Principal and Surety are held and bound unto the beneficiaries of the trust fund created by RCW 60.28 in the penal sum of _____ percent (___%) of the final contract cost which shall include any increases due to change orders, increases in quantities of work or the addition of any new item of work. If the Principal shall use the earned retained funds, which will not be retained, for the trust fund purposes of RCW 60.28, then this obligation shall be null and void; otherwise, it shall remain in full force and effect until release is authorized in writing by the Obligee. This bond and any proceeds therefrom shall be made subject to all claims and liens and in the same manner and priority as set forth for retained percentages in RCW 60.28.

PROVIDED HOWEVER, that:

1. The liability of the surety under this bond shall not exceed 5% or 50% of the total amount earned by the Principal if no monies are retained by the Obligee on estimates during the progress of construction.
2. Any suit under this bond must be instituted within the time provided by applicable law.

Witness our hands this _____ day of _____, 2____.

SURETY **PRINICPAL**

By:_____ By:_____
Name/Title Name/Title

OF:_____ OF:_____

Surety Name and Local Office of Agent:_____

Surety Address and Phone of Local Office and Agent:_____

_____

CITY OF KIRKLAND
RETAINED PERCENTAGE ESCROW AGREEMENT
Trend Lift Station Project
JOB NO. 34-24-PW

Escrow No. _____

City of Kirkland
123 Fifth Avenue
Kirkland, Washington 98033

Contractor: _____

Address: _____

Project Description: _____

_____

_____

TO: Escrow Bank or Trust Company:

Name: _____

Address: _____

_____

Attention: _____

The undersigned, _____, herein referred to as the Contractor, has directed the City of Kirkland to deliver to you its warrants, which shall be payable to you and the Contractor jointly. Such warrants are to be held and disposed of by you in accordance with the following instructions and upon the terms and conditions hereinafter set forth.

INSTRUCTIONS

1. Warrants or checks made payable to you and the Contractor jointly upon delivery to you shall be endorsed by you and forwarded for collection. The moneys will then be used by you to purchase, as directed by the Contractor, bonds or other securities chosen by the Contractor and approved by the City of Kirkland. Attached is a list of such bonds, or other securities approved by the City of Kirkland. Other bonds or securities, except stocks, may be selected by the Contractor, subject to the express written approval of the City of Kirkland. Purchase of such bonds or other securities shall be in a form which shall allow you alone to reconvert such bonds or other securities into money if you are required to do so at the direction of the City of Kirkland and Contractor.

2. When and as interest on the securities held by you pursuant to this agreement accrues and is paid, you shall collect such interest and forward it to the Contractor at its address designated below unless otherwise directed by the Contractor.

3. You are not authorized to deliver to the Contractor all or any part of the securities held by you pursuant to this agreement (or any moneys derived from the sale of such securities, or the

negotiation of the City of Kirkland's warrants) except in accordance with written instructions from the City of Kirkland. Compliance with such instructions shall relieve you of any further liability related thereto. The estimated completion date on the contract underlying this Escrow Agreement is _____.

4. The Contractor agrees to pay you as compensation for your services hereunder as follows:

   Payment of all fees shall be the sole responsibility of the Contractor and shall not be deducted from any property placed with you pursuant to this agreement until and unless the City of Kirkland directs the release to the Contractor of the securities and moneys held hereunder whereupon you shall be granted a first lien upon such property released and shall be entitled to reimburse yourself from such property for the entire amount of your fees as provided for hereinabove. In the event that you are made a party to any litigation with respect to the property held by you hereunder, or in the event that the conditions of this escrow are not promptly fulfilled or that you are required to render any service not provided for in these instructions, or that there is any assignment of the interests of this escrow or any modification hereof, you shall be entitled to reasonable compensation for such extraordinary services from the Contractor and reimbursement from the Contractor for all costs and expenses, including attorneys fees occasioned by such default, delay, controversy, or litigation.

5. This agreement shall not be binding until executed by the Contractor and the City of Kirkland and accepted by you.

6. This instrument contains the entire agreement between you, the Contractor and the City of Kirkland, with respect to this escrow and you are not a part nor bound by any instrument or agreement other than this; you shall not be required to take notice of any default or any other matter nor be bound by nor required to give notice or demand, nor required to take any action whatever, except as herein expressly provided; you shall not be liable for any loss or damage not caused by your own negligence or willful misconduct.

7. The foregoing provisions shall be binding upon the assigns, successors, personal representatives, and heirs of the parties hereto.

8. The Contractor's Federal Income Tax Identification number is _____.

**** Please note: Written release will be issued by the Director of Finance & Administration. For further information, contact the Purchasing Agent at (425) 587-3123.

The undersigned have read and hereby approve the instructions as given above governing the administration of this escrow and do hereby execute this agreement on this _____ day of _____, 2____.

CONTRACTOR:

By: _____
Signature

_____
Print or Type Name

_____
Title

Address: _____

_____

CITY OF KIRKLAND:

By: _____
Signature

_____
Print or Type Name

_____
Title

123 Fifth Avenue
Kirkland, Washington 98033

The above escrow instructions received and accepted this _____ day of _____, 2____.

ESCROW BANK OR TRUST CO:

_____

By: _____
Authorized Signature

_____
Print or Type Name

_____
Title

Securities Authorized by City of Kirkland (select one):

1. Bills, certificates, notes or bonds of the United States;
2. Other obligations of the United States or its agencies;
3. Obligations of any corporation wholly-owned by the government of the United States;
4. Indebtedness of the Federal National Mortgage Association; and
5. Time deposits in commercial banks.

RETURN THIS SIGNED AGREEMENT TO:

City of Kirkland
Attn: Purchasing Agent
123 Fifth Avenue
Kirkland, Washington 98033

CITY OF KIRKLAND
RETAINAGE RELEASE REQUIREMENTS

DOCUMENTS REQUIRED TO BE ON FILE PRIOR TO RELEASE OF RETAINAGE

1. Intent to Pay Prevailing Wage (Contractor must generation including for subcontractors)

   Department of Labor/Industries
   Employment Standards Division
   General Administration Building
   Olympia, Washington 98504
   (360) 956-5335

2. Notice of Completion of Public Works Contract (City generates)

   Department of Revenue
   Excise Tax Division
   Olympia, Washington 98504

3. Affidavit of Wages Paid (Contractor must generate including for subcontractors)

   Department of Labor/Industries

4. Certificate of Release - State Excise Tax by Public Works Contractor (Letter from State to City)

   Department of Revenue
   Department of Labor and Industries
   Employment Security Department

5. Receipt for Payment in full or Release of Lien signed by Lien Claimant and filed with City (Responsibility of Contractor to obtain)

   Claims against retainage or Payment Bond filed with City by any such subcontractor, workman, or material supplier.

6. Current insurance certificate through retainage release (Contractor generates)
7. Produce final invoice for retainage if bond is not selected (Contractor generates)

SPECIAL PROVISIONS

GSP DIVISION 1

City of Kirkland

SPECIAL PROVISIONS

Supplement to

2025

WSDOT Standard Specifications

City of Kirkland
TABLE OF CONTENTS - SPECIAL PROVISIONS

City of Kirkland Special Provisions

INTRODUCTION

The work on this project shall be accomplished in accordance with the Standard Specifications for Road, Bridge and Municipal Construction, **2025** edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions supersede any conflicting provisions of the Standard Specifications.

The accompanying Plans and these Specifications and any Addenda thereto, show and describe the location and type of work to be performed under the **Trend Lift Station Project, Job No. 34-24-PW.**

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

The titles of headings of the Sections and subsections herein are intended for convenience or reference and shall not be considered as having any bearing on their interpretation.

Several types of Special Provisions are included in this contract and are differentiated as follows:

General Special Provisions (GSPs) are similar to Standard Specifications in that they typically apply to many public works projects. These can include:

- **Local Agency/APWA Approved GSPs** are modifications to the Standard Specifications prepared by the APWA Division 1 subcommittee, which is comprised of representatives of local agencies throughout the State of Washington. These GSPs are generally used throughout the state. APWA GSPs replace what was formerly referred to as "Division 1-99 APWA Supplement" in previous editions of the Standard Specifications for Road, Bridge and Municipal Construction. Denoted as: **(*date APWA GSP)***

- **City of Kirkland GSPs** are modifications to the Standard Specifications prepared by the City of Kirkland Public Works Department, and commonly applicable to City of Kirkland projects. Denoted as: ***(date COK GSP)***

Project-Specific Special Provisions normally appear only in the contract for which they were developed. Denoted as: ***(******)***

Also incorporated into the Contract Documents by reference are:

- Manual on Uniform Traffic Control Devices for Streets and Highways, currently adopted edition, with Washington State modifications, if any
- Standard Plans for Road, Bridge and Municipal Construction, WSDOT/APWA, current edition
- City of Kirkland Public Works Department Pre-Approved Plans and Policies, current year edition.
- Geotechnical Report, Trend Lift Station. Published by HWA Geosciences Inc., May 3, 2022.

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

DIVISION 1 - GENERAL REQUIREMENTS

DESCRIPTION OF WORK

This contract provides for the removal of existing pumps, piping, fittings, power and control conduit and wiring, selective sections of a concrete wet well and dry well, appurtenances, sewer bypass pumping, and installation of pumps in a modified wet well complete with new power and control wiring, grout modification, a precast concrete valve vault, davit crane bases, electrical transformer and power panels, landscaping, piping, fittings, appurtenances, and all related Work including a tree removal, all in accordance with the Contract Plans, these Contract Special Provisions, and the Standard Specifications.

1-01 DEFINITIONS AND TERMS

(January 4, 2016 APWA GSP)

1-01.3 Definitions

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

Dates

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

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

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

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

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

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

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

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

Supplement this Section with the following:

All references in the Standard Specifications or WSDOT General Special Provisions, to the terms “Department of Transportation”, “Washington State Transportation Commission”, “Commission”,

“Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency”.

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

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

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

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

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

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

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

Contract Documents
See definition for “Contract” in Standard Specifications.

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

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

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

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

1-02 BID PROCEDURES AND CONDITIONS

(January 24, 2011 APWA GSP)

1-02.1 Prequalification of Bidders

Delete this Section and replace it with the following:

1-02.1 Qualifications of Bidder

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

(January 1, 2016 COK GSP)

Bidders shall complete and sign the Statement of Bidder's Qualification contained in the Proposal. Said form must be submitted with the bid proposal.

After bids are opened, Contracting Agency may request that a bidder or all bidders provide supplemental information concerning responsibility in accordance with RCW 39.04.350(2). Such supplemental information shall be provided to Contracting Agency in writing within two (2) business days of the request. Whether bidder supplies this supplemental information within the time and manner specified or not, in addition to consideration of this additional information, Contracting Agency may also base its determination of responsibility on any available information related to the supplemental criteria.

If Contracting Agency determines that a bidder is not responsible, Contracting Agency will provide, in writing, the reasons for such determination at which point the contractor will be deemed disqualified in accordance with WSDOT Standard Specification 1-02.14(10) and the proposal rejected. The bidder may appeal the determination within two (2) business days after receipt of the determination by presenting additional information to Contracting Agency. Contracting Agency will consider the additional information before issuing its final decision. If Contracting Agency's final decision affirms that the bidder is not responsible, Contracting Agency will not execute a contract with any other bidder until two (2) business days after the bidder determined to be not responsible has received Contracting Agency's final determination. The failure or omission of a bidder to receive or examine any form, instrument, addendum or other document shall in no way relieve any bidder from obligations with respect to the bid or to the contract.

Any bidder may, within five (5) business days before the bid submittal deadline, request that Contracting Agency modify the supplemental criteria. Contracting Agency will evaluate the information submitted by the bidder and respond before the submittal deadline. If the evaluation results in a change of the criteria, the Contracting Agency will issue an Addendum to the bidding documents identifying the new criteria.

Supplemental Criteria. Contracting Agency acknowledges that Change Orders (changes, extra work, requests for equitable adjustment and claims (defined as including demands for money or time in excess of the contract amount or contract time)) are ubiquitous on public works construction projects. The expeditious resolution of Change Orders is critical to the on budget and on time successful completion of a public works project. Thus, the City has established the following relevant supplemental bidder responsibility criteria applicable for the project:

1. Criterion. The bidder must demonstrate a record of successful and timely resolution of Change Orders including compliance with public contract Change Order resolution procedures (e.g. timely notice of event giving rise to the Change Order, timely submission of a statement of the cost and/or impact of the Change Order unless the bidder is able to show extenuating circumstances that explain bidder's failure to timely provide such information to the satisfaction of Contracting Agency.

2. Documentation. As evidence that the bidder meets the supplemental responsibility criteria, after bids are opened and within two (2) business days of the public notice of Contracting Agency's tabulation of bids, the lowest responsive bidder must submit the following documentation of public works projects completed within the previous three (3) years and include for each project the following:

    a. The Owner and contact information for the Owner;

    b. A listing of Change Orders and a signed statement from the bidder that the project timelines concerning resolution of Change Orders was complied with, and if not, provide a written explanation of what the bidder believes to be the extenuating circumstances excusing compliance with the Contract Change Order notice and claim provisions.

Contracting Agency may contact owners listed by the bidders to validate the information provided by a bidder.

(June 27, 2011 APWA GSP)

1-02.2 Plans and Specifications

Delete this section and replace it with the following:

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

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

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	5	Furnished automatically upon award.
Contract Special Provisions	2	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	2	Furnished only upon request.

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

(December 30, 2022 APWA GSP Option A)

1-02.4(1) General

The first sentence of the ninth paragraph, beginning with "Prospective Bidder desiring…", is revised to read:

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

(March 8, 2013 APWA GSP)

1-02.4(2) Subsurface Information

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

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

(July 31, 2017 APWA GSP)

1-02.5 Proposal Forms

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

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

(January 1, 2024 APWA GSP Option B)

1-02.6 Preparation of Proposal

Supplement the second paragraph with the following:

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

Delete the last two paragraphs, and replace them with the following:

The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form, provided by the Contracting Agency. Failure to return this certification as part of the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

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

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

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any DBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any DBE requirements are to be satisfied through such an agreement.

(March 8, 2013 APWA GSP)

1-02.7 Bid Deposit

Supplement this section with the following:

Bid bonds shall contain the following:

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

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

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

(January 1, 2016 COK GSP)

1-02.8 Noncollusion Declaration and Lobbying Certification

The following new paragraph is inserted at the end of Section 1-02.8:

Conflict of Interest

The bidder affirms that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services hereunder. The Contractor further covenants that in the performance of this contract, no

person having any conflicting interest shall be employed. Any interest on the part of the Contractor or its employees must be disclosed forthwith to the City of Kirkland. If this contract is within the scope of a Federal Housing and Community Development Block Grant program, the Contractor further covenants that no person who presently exercises any functions or responsibilities in connection with the block grant program has any personal financial interest, direct or indirect, in this contract.

(July 23, 2015 APWA GSP)

1-02.10 Withdrawing, Revising, or Supplementing Proposal

Delete this section, and replace it with the following:

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

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

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

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

1-02.13 Irregular Proposals

(January 4, 2024 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The Bidder adds provisions reserving the right to reject or accept the Award, or enter into the Contract;
   c. A price per unit cannot be determined from the Bid Proposal;
   d. The Proposal form is not properly executed;
   e. The Bidder fails to submit or properly complete a subcontractor list (WSDOT Form 271-015), if applicable, as required in Section 1-02.6;
   f. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification (WSDOT Form 272-056), if applicable, as required in Section 1-02.6;
   g. The Bidder fails to submit Written Confirmations (WSDOT Form 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that

they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;

h. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award in accordance with Section 1-07.11;

i. The Bidder fails to submit a DBE Bid Item Breakdown (WSDOT Form 272-054), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;

j. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation.

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

(May 17, 2018 APWA GSP, Option B)

1-02.14 Disqualification of Bidders

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1-7 listed in this Section.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-7 shall be provided by the Bidder as stated later in this Section.

1. **Delinquent State Taxes**

   A Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.

   B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder does not owe delinquent taxes to the Washington State Department of Revenue,

or if delinquent taxes are owed to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

2. **Federal Debarment**

A Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.

B. Documentation: The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).

3. **Subcontractor Responsibility**

A Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.

B. Documentation: The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. **Claims Against Retainage and Bonds**

A Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;
- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

5. **Public Bidding Crime**

A Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

6. **Termination for Cause / Termination for Default**

A Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances. .

7. **Lawsuits**

A Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts

As evidence that the Bidder meets the Supplemental Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the supplemental criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the Supplemental Criteria. The Contracting Agency reserves the right to request further documentation as needed from the low Bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Contracting Agency also reserves the right to obtain information from third-parties and

independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

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

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

(December 30, 2022 APWA GSP)

1-02.15 Pre Award Information

Revise this section to read:

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

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

7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.3 Execution of Contract

(January 4, 2024 APWA GSP Option B)

Revise this section to read:

Within 3 calendar days of Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide the information necessary to execute the Contract to the Contracting Agency. The Bidder shall send the contact information, including the full name, email address, and phone number, for the authorized signer and bonding agent to the Contracting Agency.

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 fourteen (14) calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

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

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of seven (7) additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

(January 1, 2016 COK GSP)

1-03.4 Contract Bond

Revise the first paragraph to read:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. Separate payment and performance bonds are required and each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and

b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner, and
c. Have an A.M. best rating of A:VII or better.

3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

(December 30, 2022 APWA GSP)

1-03.7 Judicial Review

Revise this section to read:

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

1-04 SCOPE OF THE WORK

(January 1, 2016 COK GSP)

1-04.1 Intent of the Contract

Section 1-04.1 is supplemented with the following:

All materials, tools, labor, and guarantees thereof of required to complete the work shall be furnished and supplied in accordance with the Plans, these Special Provisions, the Standard Specifications, and City of Kirkland Pre-Approved (Standard) Plans and Policies. The Contractor shall include all costs of doing this work within the contract bid item prices.

(December 30, 2022 APWA GSP)

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

Revise the second paragraph to read:

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

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Standard Specifications,
6. Contracting Agency's Standard Plans or Details (if any), and
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

(May 30, 2019 APWA GSP)

1-04.4(1) Minor Changes

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to $10,000 or less may be made under the Bid item "Minor Change". At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All "Minor Change" work will be within the scope of the Contract Work and will not change Contract Time

(July 23, 2015 APWA GSP, Option B)

1-04.6 Variation in Estimated Quantities

Revise the first paragraph to read:

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

(January 1, 2016 COK GSP)

1-04.11 Final Cleanup

Section 1-04.11 is deleted in its entirety and replaced with the following:

The Contractor shall perform final cleanup as provided in this Section. The Engineer will not establish the Physical Completion Date until this is done. All public and private property the Contractor occupied to do the Work, including but not limited to the Street Right of Way, material sites, borrow and waste sites, and construction staging area shall be left neat and presentable. Immediately after completion of the Work, the Contractor shall cleanup and remove all refuse and unused materials of any kind resulting from the Work. Failure to do the final cleanup may result in the final cleanup being done by the Owner and the cost thereof charged to the Contractor and deducted from the Contractor's final progress estimate.

The Contractor shall:

1. Remove all rubbish, surplus materials, discarded materials, falsework, piling, camp buildings, temporary structures, equipment, and debris;
2. Remove from the Project, all unneeded, oversized rock left from grading, surfacing, or paving unless the Contract specifies otherwise or the Engineer approves otherwise;
3. On all concrete and asphalt pavement work, flush the pavement clean and remove the wash water and debris;
4. Sweep and flush structure decks and remove wash water and debris;
5. Clean out from all open culverts and drains, inlets, catch basins, manholes and water main valve chambers, within the limits of the Project Site, all dirt and debris of any kind that is the result of the Contractor's operations;
6. Level and fine grade all excavated material not used for backfill where the Contract requires;
7. Fine grade all slopes;
8. Upon completion of grading and cleanup operations at any privately-owned site for which a written agreement between the Contractor and property owner is required, the Contractor shall obtain and furnish to the Engineer a written release from all damages, duly executed by the property owner, stating that the restoration of the property has been satisfactorily accomplished.;

All costs associated with cleanup shall be incidental to the Work and shall be included in the various Bid items in the Bid, and shall be at no additional cost to the Owner.

(January 27, 2021 COK GSP)

Add new Section 1-04.12.

1-04.12 Water, Electrical Power, Telecommunications, and Sanitary Sewer Requirements

Except where specifically indicated otherwise in the Contract Documents, the Contractor shall make all necessary arrangements and bear all costs as incidental to the Contract for permits, temporary hook-ups, usage fees, and decommissioning of temporary services for all water, electrical power, telecommunications, and/or sanitary sewer services necessary for performance of the Work.

1-05 CONTROL OF WORK

(January 27, 2021 COK GSP)

1-05.1 Authority of the Engineer

Section 1-05.1 is supplemented with the following:

When directed by the Engineer for purposes such as (but not limited to) maintaining unrestricted public access and use outside the Work area, maintaining an appropriate construction site appearance, and/or allowing full access to the Work by the Engineer or other City personnel, the Contractor shall cleanup and remove debris, refuse, and discarded materials of any kind resulting from the Work to meet those purposes. These activities shall be incidental to the bid items associated with the Work that generated the debris, refuse, and discarded materials. Failure to do so may result in cleanup done by the Owner and the

cost thereof charged to the Contractor by either deducting from the next Progress Payment to the Contractor or direct billing from the City

(January 1, 2020 COK GSP)

1-05.4 Conformity with and Deviations from Plans and Stakes

Section 1-05.4 is supplemented with the following:

Unless otherwise identified on Plans or in the Special Provisions, Unit Bid prices shall cover all costs for all surveying labor, equipment, materials, and supervision required to perform the Work. This shall include any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts.

(January 1, 2016 COK GSP)

Add new Section 1-05.4(1).

1-05.4(1) Roadway and Utility Surveys

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of the improvements under this contract. Except for the survey control data furnished by the Owner, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility.

The Owner may spot-check the Contractor's surveying. These spot-checks will not change the requirements for normal checking by the Contractor.

To facilitate the establishment of lines and elevations, the Owner will provide the Contractor with primary survey control information consisting of descriptions of two primary control points used for the horizontal and vertical control. Primary control points will be described and shown on the right-of-way Plans. The Contractor shall check all control points for horizontal and vertical locations prior to use and report any discrepancy to the Engineer. Errors resulting from using control points which have not been verified, shall be the Contractors responsibility.

At a minimum the Contractor shall provide following survey staking shall be required:

1. Construction centerline or an offset to construction centerline shall be staked at all angle points and 100-foot intervals on tangents.
2. Offset stakes of JUT Centerline at all angle points and at 50-foot intervals on tangents
   a. Cut/fill shall reference the elevations of the lowest conduit.
   b. Offset shall reference the location of the center of trench and list the width of the trench section.
3. Offset stakes of all structure control/location points shown on the undergrounding Plans.
   a. Each vault, handhold, and junction box shall have a sets of off-set points provided each location point shown in the location tables Cut/Fill shall reference elevations of the finish grade of the top lid of the structure.
   b. Each pole riser and stub up, shall have at least one set of off-set hubs provided with cut/fills to finish ground elevations.

c. Finish grade elevations of all structures shall be determined by the Contractor based on the typical sections and details provide on the Contract Drawings.

4. Offset stakes at face or walls.
5. Offset staking of all drainage structures and drainage pipes at 50-foot intervals.
6. Location of all right-of-way and easements adjacent to the work area as shown on the right-of-way Plans.
7. Offset of all permanent concrete sidewalks, curb ramps, and driveways.

Each stake shall have the following information: Hub elevation, offset distance to items being staked, cut/fill to proposed elevations, design elevation of items being staked.

The above information shall also be shown on a written Cut Sheet and provided to the City inspector 48-hours prior to installation of the items being staked.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

Stationing	+.01 foot
Alignment	+.01 foot (between successive points)
Superstructure Elevations	+.01 foot (from plan elevations)
Substructure Elevations	+.05 foot (from plan elevations)
Sidewalk and Curb Ramp Elevations	+.01 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

(October 1, 2005 APWA GSP)

1-05.7 Removal of Defective and Unauthorized Work

Supplement this section with the following:

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

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its

remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

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

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

(January 1, 2016 COK GSP)

1-05.9 Equipment

The following new paragraph is inserted between the second and third paragraphs:

Use of equipment with metal tracks will not be permitted on concrete or asphalt surfaces unless otherwise authorized by the Engineer.

(January 1, 2016 COK GSP)

1-05.10 Guarantees

Section 1-05.10 is supplemented as follows:

Guarantees and maintenance bonds shall be in accordance with City of Kirkland, State of Washington, Public Works Performance and Payment Bond forms and requirements. The performance bond shall be in the full amount of contract. The Contractor guarantees all items of material, equipment, and workmanship against mechanical, structural, or other defects for which the Contractor is responsible that may develop or become evident within a period of one year from and after acceptance of the work by the Owner. This guarantee shall be understood to require prompt remedy of defects upon written notification to the Contractor. If the Owner determines the defect requires immediate repair, the Owner may, without further notice to the Contractor, make the necessary corrections, the cost of which shall be borne by the Contractor. To support the above guarantee, the Contractor's performance bond shall remain in full force and effect for one year following the acceptance of the project by the Owner.

(October 1, 2005 APWA GSP)

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing

1-05.11(1) Substantial Completion Date

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

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

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

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

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

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

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

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

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

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

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

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

(March 8, 2013 APWA GSP)

1-05.12 Final Acceptance

Add new Section 1-05.12(1).

1-05.12(1) One-Year Guarantee Period

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

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

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

(August 14, 2013 APWA GSP)

1-05.13 Superintendents, Labor and Equipment of Contractor

Delete the sixth and seventh paragraph of this section.

(January 4, 2024 APWA GSP)

1-05.15 Method of Serving Notices

Revise the second paragraph to read:

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

(March 8, 2013 APWA GSP)

Add new Section 1-05.18.

1-05.18 Record Drawings

The Contractor shall maintain one set of full size plans for Record Drawings, updated with clear and accurate red-lined field revisions on a daily basis, and within 2 business days after receipt of information that a change in Work has occurred. The Contractor shall not conceal any work until the required information is recorded.

This Record Drawing set shall be used for this purpose alone, shall be kept separate from other Plan sheets, and shall be clearly marked as Record Drawings. These Record Drawings shall be kept on site at the Contractor's field office, and shall be available for review by the Contracting Agency at all times. The Contractor shall bring the Record Drawings to each progress meeting for review.

The preparation and upkeep of the Record Drawings is to be the assigned responsibility of a single, experienced, and qualified individual. The quality of the Record Drawings, in terms of accuracy, clarity, and completeness, is to be adequate to allow the Contracting Agency to modify the computer-aided drafting (CAD) Contract Drawings to produce a complete set of Record Drawings for the Contracting Agency without further investigative effort by the Contracting Agency.

The Record Drawing markups shall document all changes in the Work, both concealed and visible. Items that must be shown on the markups include but are not limited to:

- Actual dimensions, arrangement, and materials used when different than shown in the Plans.
- Changes made by Change Order or Field Order.
- Changes made by the Contractor.
- Accurate locations of storm sewer, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

If the Contract calls for the Contracting Agency to do all surveying and staking, the Contracting Agency will provide the elevations at the tolerances the Contracting Agency requires for the Record Drawings.

When the Contract calls for the Contractor to do the surveying/staking, the applicable tolerance limits include, but are not limited to the following:

	Vertical	Horizontal
As-built sanitary & storm invert and grate elevations	± 0.01 foot	± 0.01 foot
As-built monumentation	± 0.001 foot	± 0.001 foot
As-built waterlines, inverts, valves, hydrants	± 0.10 foot	± 0.10 foot
As-built ponds/swales/water features	± 0.10 foot	± 0.10 foot
As-built buildings (fin. Floor elev.)	± 0.01 foot	± 0.10 foot
As-built gas lines, power, TV, Tel, Com	± 0.10 foot	± 0.10 foot
As-built signs, signals, etc.	N/A	± 0.10 foot

Making Entries on the Record Drawings:

- Use erasable colored pencil (not ink) for all markings on the Record Drawings, conforming to the following color code:
- Additions - Red
- Deletions - Green
- Comments - Blue
- Dimensions - Graphite
- Provide the applicable reference for all entries, such as the change order number, the request for information (RFI) number, or the approved shop drawing number.
- Date all entries.
- Clearly identify all items in the entry with notes similar to those in the Contract Drawings (such as pipe symbols, centerline elevations, materials, pipe joint abbreviations, etc.).

The Contractor shall certify on the Record Drawings that said drawings are an accurate depiction of built conditions, and in conformance with the requirements detailed above. The Contractor shall submit final Record Drawings to the Contracting Agency. Contracting Agency acceptance of the Record Drawings is one of the requirements for achieving Physical Completion.

Payment will be made for the following bid item:

Record Drawings (Minimum Bid $ **5,000**)	Lump Sum

Payment for this item will be made on a prorated monthly basis for work completed in accordance with this section up to 75% of the lump sum bid. The final 25% of the lump sum item will be paid upon submittal and approval of the completed Record Drawings set prepared in conformance with these Special Provisions.

A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor must bid at least that amount.

(November 19, 2019 COK GSP; may not be used on FHWA-funded projects; note optional/conditional nature of use for other City projects)

Add new Section 1-05.19.

1-05.19 Daily Construction Report

The Contractor and Subcontractors shall maintain daily, a Daily Construction Report of the Work. The Diary must be kept and maintained by Contractor's designated project superintendent(s). Entries must be made on a daily basis and must accurately represent all of the project activities on each day. Contractor shall provide signed copies of diary sheets from the previous week to Engineer at each Weekly Coordination Meeting.

Every single diary sheet/page must have:

• Project name & number;

• Consecutive numbering of pages, and

• Typed or printed name, signature, and date of the person making the entry.

At a minimum the diary shall, for each day, have a separate entry detailing each of the following:

1. Day and date.
2. Weather conditions, including changes throughout the day.
3. Complete description of work accomplished during the day, with adequate references to the Plans and Contract Provisions so the reader can easily and accurately identify said work on the Plans. Identify location/description of photographs or videos taken that day.
4. Each and every changed condition, dispute or potential dispute, incident, accident, or occurrence of any nature whatsoever which might affect Contractor, Contracting Agency, or any third party in any manner. This shall be provided on a separate page for other information.
5. List all materials received and stored on- or off-site by Contractor that day for future installation, including the manner of storage and protection of the same.
6. List materials installed that day.
7. List all Subcontractors working on-site that day.
8. List the number of Contractor's employees working during each day, by category of employment.
9. List Contractor's equipment on the site that day; showing which were in use, and which idle.
10. Notations to explain inspections, testing, stake-out, and all other services furnished by Contracting Agency or other party during the day.

11. Verify the daily (including non-work days) inspection and maintenance of traffic control devices and condition of the traveled roadway surfaces.
12. Any other information that serves to give an accurate and complete record of the nature, quantity, and quality of Contractor's progress on each day.
13. Add; Officials and visitors onsite
14. Change Orders
15. Occurrence of testing, staking or special inspections

It is expressly agreed between Contractor and Contracting Agency that the Daily Diary maintained by Contractor shall be the "Contractor's Book of Original Entry" for the documentation of any potential claims or disputes that might arise during this Contract. Failure of Contractor to maintain this Diary in the manner described above will constitute a waiver of any such claims or disputes by Contractor.

Preparation of the Daily Diary by the contractor shall be incidental to the unit prices for applicable bid items. No separate payment shall be made for preparation and maintaining the Daily Diary.

Engineer or the Engineer's representative on the job site will also complete a Daily Construction Report.

1-06 CONTROL OF MATERIAL

(January 1, 2016 COK GSP)

1-06.1 Approval of Materials Prior to Use

Section 1-06.1 is supplemented as follows:

Approval of a Material source shall not mean acceptance of the Material. The Material shall meet the requirements of the Contract.

(February 17, 2022 COK GSP)

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

Revise the first paragraph to read:

The RAM shall be used for all submittals unless directed otherwise by the Engineer. The RAM shall be prepared by the Contractor in accordance with the instructions on Form 350-071 and submitted to the Engineer for approval before the material is incorporated into the Work.

(June 27, 2011 AWPA GSP)

1-06.1(4) Fabrication Inspection Expense

Delete this section in its entirety.

1-06.2(2)B Financial Incentive

(January 4, 2024 AWPA GSP)

Replace the first sentence of this Section with the following:

The maximum Composite Pay Factor shall be 1.00.

(January 4, 2016 APWA GSP)

1-06.6 Recycled Materials

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

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

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Table 9-03.21(1)E in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

(January 1, 2021 COK GSP)

1-07.1 Laws to Be Observed

Section 1-07.1 is supplemented with the following:

The Contractor shall at all times eliminate noise to the maximum practicable extent. Air compressing plants shall be equipped with silencers, and the exhaust of all gasoline motors or other power equipment shall be provided with mufflers. Special care shall be used to avoid noise or other nuisances, and the Contractor shall strictly observe all federal, state, and local regulations concerning noise.

The Contractor shall make an effort to reduce carbon emissions by turning off engines on construction equipment not in active use, and on trucks that are idling while waiting to load or unload material for five minutes or more.

Compliance with Laws

The Contractor shall comply with the requirements of all other City ordinances, state statutes, laws, and regulations, whether or not stated herein, which are specifically applicable to the public improvements and work to be performed.

The Contractor shall be subject to City of Kirkland Code enforcement, as required by Kirkland Municipal Code (KMC) Chapter 1.12. The Contractor shall fully comply with and satisfy all fines and costs assessed by code enforcement(s) prior to the Completion Date, unless otherwise authorized by the City of Kirkland in writing.

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

(January 1, 2016 COK GSP)

Supplement this section with the following:

Contractor's Safety Responsibilities

These construction documents and the joint and several phases of construction hereby contemplated are to be governed at all times by applicable provisions of the federal law(s), including but not limited to the latest amendments of the following:

Williams-Steiger Occupational Safety and Health Act of 1980, Public Law 91-596.

Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.

This project, the Contractor and its subcontractors, shall, at all times, be governed by Chapter XIII of Title 29, Code of Federal Regulations, Part 1518 - Safety and Health Regulations for Construction (35 CFR 75), as amended to date.

To implement the program, and to provide safe and healthful working conditions for all persons, the construction superintendent or his/her designated safety officer shall conduct general project safety meetings at the site at least once each month during the course of construction.

The Contractor and all subcontractors shall immediately report all accidents, injuries, and health hazards to the Owner, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970. This program shall become a part of the contract documents and the contract between the Owner and the Contractor, and all subcontractors, as though fully written therein.

Where the location of the work is in proximity to overhead wires and power lines, the Contractor shall coordinate all work with the utility and shall provide for such measures as may be necessary for the protection of the workers.

(June 27, 2011 APWA GSP)

1-07.2 State Taxes

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

1-07.2 State Sales Tax

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

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

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

1-07.2(1) State Sales Tax — Rule 171

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

1-07.2(2) State Sales Tax — Rule 170

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

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

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

1-07.2(3) Services

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

(January 1, 2021 COK GSP)

1-07.5(2) State Department of Fish and Wildlife

Supplement this section with the following:

New Zealand mud snails are an aquatic invasive species of concern for the Puget Sound region, as they have already invaded waterways near the City of Kirkland. Contractors working in-water (e.g. natural stream, small ponds and lakes, wetlands, etc.), including all construction equipment and vehicles used in-water, shall follow the Level 1 decontamination protocols and implement all Special Protocols for personnel and equipment as described in the “Invasive Species Management Protocols” published by the Washington State Department of Fish and Wildlife (WDFW) (Draft Version 3, February 2016). This document can be found on the WDFW website.

For Work that will be performed in-water in the City of Kirkland, all Contractor vehicles and/or heavy equipment previously used for in-water work outside the City of Kirkland shall be cleaned by the Contractor as indicated for “Boats and other Large Aquatic Conveyances Transported Overland”, as described in the “Invasive Species Management Protocols” published by the Washington State Department of Fish and Wildlife (WDFW) (Draft Version 3, February 2016).

The Contractor is only required to follow Level 2 Decontamination Protocols in the Work area when indicated in the Contract documents.

All labor and materials required for completing decontamination and cleaning protocols shall be incidental to the Contract bid items, unless otherwise indicated in the Contract Documents.

(January 1, 2021 COK GSP)

1-07.5(3) State Department of Ecology

Supplement this section with the following:

Contractor shall comply with all requirements of the Construction Stormwater General Permit (CSWGP), if this permit has been issued for this Work. Additionally, Contractor shall comply with all applicable requirement of Kirkland Municipal Code KMC 15.52, as this local code has been adopted to meet Washington State Department of Ecology requirements for city stormwater management.

CSWGP Permit Number (if issued): **N/A**

CSWGP coverage is typically only issued by the State Department of Ecology in the event the disturbed area for the Work is greater than one (1) acre. In the event CSWGP coverage has been issued for this Work, Contractor shall coordinate the Transfer of the permit from the Contracting Agency to the Contractor prior to any ground disturbance commencing in the Work area.

Unless identified otherwise in the Contract Documents, compliance with all requirements of this Section, the CSWGP, and the Kirkland Municipal Code KMC 15.52 shall be incidental to Contract pay items.

Revise the paragraph 6 to read:

6. When a violation of the Construction Stormwater General Permit (CSWGP) and/or Kirkland Municipal Code KMC 15.52 occurs, Contractor shall immediately notify the City of Kirkland Spill Hotline (425) 587-3900. Contractor shall also report to the Engineer and other agencies as identified in the Contractor's Spill Prevention, Control, and Countermeasures (SPCC) Plan (prepared in accordance with Section 1-07.15(1)).

Revise the paragraph 8 to read:

8. If directed by the Contracting Agency and instead of or in partial conjunction with a Notice of Completion, transfer the CSWGP coverage to the Contracting Agency when Physical Completion has been given and the Engineer has determined that the project site is not destabilized from erosion.

(January 1, 2021 COK GSP)

1-07.5(6) U.S. Fish and Wildlife Service and National Marine Fisheries Service

Delete this section and replace it with the following:

The Contractor shall provide all required fish exclusion and handling services required by the Work, unless otherwise indicated in the Contract Documents. If the Contractor discovers any fish stranded by the project, they shall immediately transfer and release the fish alive into a flowing stream or open water outside the Work area.

(January 1, 2021 COK GSP)

1-07.6 Permits and Licenses

Replace item 6 of the second paragraph of this section with the following:

6. The permit costs the Contracting Agency nothing. This shall include, but not be limited to, application and initial review fees, costs associated with fulfillment of all permit requirements, additional operational fees assessed during the life of the permit.

Supplement second paragraph of this section with the following:

7. When a violation of the Construction Stormwater General Permit (CSWGP) and/or Kirkland Municipal Code KMC 15.52 occurs, Contractor shall immediately notify the City of Kirkland Spill Hotline (425) 587-3900. Contractor shall also report to the Engineer and other agencies as identified in the Contractor's Spill Prevention, Control,

and Countermeasures (SPCC) Plan (prepared in accordance with Section 1-07.15(1)).

(January 1, 2021 COK GSP)

1-07.6(1) Permits for Sanitary Sewer Discharge for Construction Dewatering

Add new Section 1-07.6(1)

The Contracting Agency has not obtained a King County Authorization for Construction Dewatering or local sanitary sewer operating permits for this Work. Contractor proposals for this method of construction stormwater disposal will be supported by the Contracting Agency only if, as determined by the Engineer, the proposal meets all the requirements indicated in Section 1-07.6 and this Section.

Contractors proposing to use sanitary sewer methods for construction dewatering and discharge are directed to the King County web page for "Construction Dewatering" for applications and information on the application process.

In addition to the requirements of Section 1-07.6, Contractor shall provide to the Engineer the written permission obtained by the Contractor from the local sanitary sewer operating agency for use of the sanitary sewer for construction dewatering discharge in advance of the Contractor applying for either general or individual King County Authorization for Construction Dewatering.

Unless otherwise indicated in the Contract Documents or by the Engineer in writing, no claims for equitable adjustment of Contract Time will be approved in order to obtain King County Authorizations and/or local sanitary sewer operating permits.

(January 1, 2021 COK GSP)

1-07.6(2) Permits for Off-site Staging and Storage Areas

Add new Section 1-07.6(2)

The Contracting Agency has not obtained any City of Kirkland Temporary Use Permits for temporary use(s) of off-site areas or properties in the City of Kirkland for the purposes of staging, materials storage, and/or any other Contractor-desired temporary uses during the Work. A City of Kirkland Temporary Use Permit must be obtained by the Contractor for temporary use for the Work of any off-site areas or properties not located in a City of Kirkland right-of-way (ROW). This requirement is in addition to any permissions and/or agreements reached between the Contractor and the property owner(s) as required in Section 1-07.24.

"Off-site" will be taken to mean any area not designated as part of the Work in the Plans or other Contract Documents.

A City of Kirkland Temporary Use Permit is not required for additional use of areas located in a City of Kirkland right-of-way (ROW) and not indicated in the Plans or other Contract Documents. However, the Contractor shall not occupy additional City of Kirkland ROW not shown as part of the Work without advance written approval by the Engineer. Contractor shall photograph and/or video document the existing conditions of ROW used. Any damage or degradation of the existing conditions in these areas shall be repaired and/or replaced by the Contractor at no additional cost to the City of Kirkland.

Contractor shall apply for a City of Kirkland Temporary Use Permit from the City of Kirkland Planning and Building Department through http://mybuildingpermit.com . Contractor shall also notify the Engineer when the Temporary Use Permit application has been submitted.

Unless otherwise indicated in the Contract Documents or by the Engineer in writing, no claims for equitable adjustment of Contract Time will be allowed requesting additional time required for the Contractor to obtain a City of Kirkland Temporary Use Permit for temporary use of any off-site area or property not designated as part of the Work area in the Plans.

(January 3, 2020 APWA GSP)

1-07.9(5) Required Documents

Delete this section and replace it with the following:

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

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

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

2. The approved "Affidavit of Prevailing Wages Paid", State L&I's form number F700-007-000. The Contracting Agency will not grant Completion until all approved Affidavit of Wages paid for the Contractor and all Subcontractors have been received by the Engineer. The Contracting Agency will not release to the Contractor any funds retained under RCW 60.28.011 until "Affidavit of Prevailing Wages Paid" forms have been approved by State L&I and all of the approved forms have been submitted to the Engineer for every firm that worked on the Contract.

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

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

Penalties for Noncompliance
The Contractor is advised, if these payrolls are not supplied within the prescribed deadlines, any or all payments may be withheld until compliance is achieved. In addition, failure to provide these payrolls may result in other sanctions as provided by State laws (RCW 39.12.050) and/or Federal regulations (29 CFR 5.12).

1-07.9(5)A Required Documents

(December 30, 2022 APWA GSP)

This section is revised to read as follows:

All Statements of Intent to Pay Prevailing Wages, Affidavits of Wages Paid and Certified Payrolls, including a signed Statement of Compliance for Federal-aid projects, shall be

submitted to the Engineer and to the State L&I online Prevailing Wage Intent & Affidavit (PWIA) system.

(January 1, 2016 COK GSP)

1-07.14 Responsibility for Damage

Section 1-07.14 is supplemented with the following:

The Contractor further agrees that it is waiving immunity under Industrial Insurance Law Title 51 RCW for any claims brought against the City by its employees. In the event Contractor fails, after receipt of timely notice from the City, to appear, defend, or pay as required by the first paragraph of this section, then in that event and in that event only, the City may in its sole discretion, deduct from the progress payments to the Contractor and pay any amount sufficient to pay any claim, of which the City may have knowledge and regardless of the informalities of notice of such claim, arising out of the performance of this contract, provided the City has theretofore given notice of receipt of such claim to the Contractor and the Contractor has failed to act thereon.

1-07.15 Temporary Water Pollution/Erosion Control

(January 10, 2019 COK GSP)

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

Add the following paragraph under the second paragraph of this section:

In the event the Contractor uses an SPCC Plan template that either follows the WSDOT SPCC Plan Template or contains the same or similar content and/or format, the following changes shall be required:

1. Replace all references to “WSDOT” as either the Contracting Agency or project owner with “City of Kirkland”, except where indicated in this Section.
2. Add into all Spill Reporting and related section(s): “The City of Kirkland Spill Response Hotline at (425) 587-3900 shall be the first point of contact in the event of a spill. Notification to the City of Kirkland Spill Response Hotline shall precede the spill notifications to federal and state agencies.”
3. Delete all references to the “WSDOT Environmental Compliance Assurance Procedure” (ECAP) in the SPCC.

Supplement the following referenced SPCC Plan Element Requirements in this Section as follows:

For SPCC Plan Element Requirement Number 2, add the following: “The City of Kirkland Spill Response Hotline at (425) 587-3900 shall be the first point of contact in the event of a spill.”

For SPCC Plan Element Requirement Number 8, add the following: “As part of Contractor spill response procedure, the Contractor shall contact the City of Kirkland Spill Response Hotline at (425) 587-3900 to report the spill regardless of whether or not the Contractor has fully contained, controlled, and/or cleaned up the spill.”

1-07.16 Protection and Restoration of Property

(January 1, 2016 COK GSP)

1-07.16(3) Fences, Mailboxes, Incidentals

Section 1-07.16(3) is supplemented with the following:

U.S. Postal Service Collection Boxes, Mail Receptacles, and other Structures: U.S. Postal Service collection box and other Structures requiring temporary relocation to accommodate construction, the Contractor shall contact the Kirkland Postmaster at least 5 Working Days in advance for coordination. Only the U.S. Post Office will move Postal Service-owned property.

(January 1, 2020 COK GSP)

1-07.17 Utilities and Similar Facilities

Section 1-07.17 is supplemented with the following:

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

The Contractor is alerted to the existence of Chapter 19.122 RCW, a law relating to underground utilities. Any cost to the Contractor incurred as a result of this law shall be at the Contractor's expense.

No excavation shall begin until all known facilities in the vicinity of the excavation area have been located and marked.

The Contractor shall give advance notice to all utility companies involved where work is to take place and in all other respects comply with the provisions of Chapter 19.122 RCW. Notice shall include, but not be limited to, the following utility companies:

4. Water, sewer, storm, streets – minimum two working days in advance
5. Power (Electric and Natural Gas) – minimum 48 hours in advance
6. Telephone – minimum 30 days in advance
7. Natural Gas – minimum 48 hours in advance
8. Cable Television – minimum 48 hours in advance
9. Transit – minimum 21 days in advance

The following is a list of some utilities serving the Kirkland area. This is not intended or represented to be a complete list and is provided for the Contractor's convenience.

Utility	Agency/Company	Address	Contact	Phone
Water/Sewer	City of Kirkland	123 Fifth Avenue Kirkland, WA 98033	Tom Chriest	(425) 587-3900
Storm Drainage	City of Kirkland	123 Fifth Avenue Kirkland, WA 98033	Jason Osborn	(425) 587-3900
Water / Sewer (North area of Kirkland)	Northshore Utility District	6380 NE 185th St Kenmore, WA 98028	George Matote Kelly Nesbitt	(425) 398-4400 (425) 521-3750

Street	City of Kirkland	123 Fifth Avenue Kirkland, WA 98033	Chris Gavigan	(425) 587-3900
Natural Gas	Puget Sound Energy	P.O. Box 97034 EST-11W Bellevue, WA 98009-9734	Patty Miller	(206) 305-7950
Electric	Puget Sound Energy	35131 SE Center St Snoqualmie, WA 98065	Fremont Aguinaldo	(425) 223-0936
Telephone/ FIOS	Ziply Fiber	P.O. Box 1127 Everett, WA 98206	Cheryl Schneider	(425) 218-1294
FIOS	Astrobound/Wave Broadband		Richard Hays	(360) 631-4134
FIOS	CenturyLink/Lumen	22817 SE Issaquah-Fall City Rd, WA, 98027	Kayvan Fassnacht	(425) 213-9378
FIOS	Zayo	22651 83rd Ave. S. Kent, WA 98032	Rusty Perdieu	(706) 889-6967
Cable Television	Comcast	1525 - 75th St SW, Suite 200 Everett, WA 98203	Bianca Crawford	(253) 303-2723
Network	Verizon/MCI	11311 NE 120th St Kirkland, WA 98034	Scott Christenson	(425) 471-1079
School District Transportation	Lake Washington School District	15212 NE 95th St Redmond, WA 98052	Jeff Miles	(425) 936-1120
Transit	King County METRO	MS SVQ-TR-0100 1270 6th Ave S Seattle, WA 98134	Construction Coordinator	(206) 684-2732
Water (Northeast area of Kirkland)	Woodinville Water District	17238 NE Woodinville Duvall Road, Woodinville, WA 98072	Christian Hoffman	(425) 487-4142
Olympic Pipeline	BP		Kenneth Metcalf Joseph Stone	(425) 981-2575 (425) 981-2506
Water (along 132nd Ave NE)	Seattle Public Utilities		Mike Freeman	(206) 684-8117

Note that most utility companies may be contacted for locations through the "One Call" system, 1-800-424-5555. In the event of a gas emergency, call 911 and then the PSE hotline at 1-888-225-5773 (1-888-CALL-PSE).

The Contractor shall coordinate the work with these utilities and shall notify the Engineer in advance of any conflicts affecting the work schedule. The utility companies shall witness or perform all shutdowns, connections or disconnections.

Wherever in the course of the construction operation it becomes necessary to cause an outage of utilities, it shall be the Contractor's responsibility to notify the affected users not less than twenty-four (24) hours in advance of the creation of such outage. The Contractor shall make reasonable effort to minimize the duration of outages.

The Contractor shall be responsible for any breakage of utilities or services resulting from its operations and shall hold the City and its agents harmless from any claims resulting from disruption of, or damage to, same.

Other Notifications

Service Area Turn Off: All service area turn off notices must be distributed to affected parties two working days in advance of any scheduled shut off. City to provide door hangers and affected service area map. The contractor shall fill in all required information prior to hanging door hanger.

Entry onto Private Property: Each property owner shall be given two working days advance Written Notice prior to entry by the Contractor.

Loop Detection Systems: Where an excavation is to take place through a signal loop detector system, the Contractor shall provide at least five (5) Working Days advance notice to the City Signal Shop at (425) 587-3920 to coordinate temporary signal wire disconnect and installation of temporary signal detection equipment.

Survey Monuments: When proposed pavement removal is close to existing survey monumentation, or proposed pavement removal includes existing survey monumentation, the Contractor shall provide a minimum 4 Working Days advance notice to the Engineer to allow survey crews to tie the monument out and reset the monument after pavement installation.

(January 1, 2016 COK GSP)

1-07.17(2) Utility Construction, Removal or Relocation by Others

Section 1-07.17(2) is supplemented with the following:

Under no circumstances will discrepancies in location or incompleteness in description of existing utilities or improvements, whether they are visible from the surface, buried, or otherwise obscured, be considered as a basis for additional compensation to the Contractor.

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Insurance
(January 4, 2024 APWA GSP)

1-07.18(1) General Requirements

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

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

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

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

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

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

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

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

I. Under no circumstances shall a wrap up policy be obtained, for either initiating or maintaining coverage, to satisfy insurance requirements for any policy required under this Section. A **"**wrap up policy**"** is defined as an insurance agreement or arrangement under which all the parties working on a specified or designated project are insured under one policy for liability arising out of that specified or designated project**.**

1-07.18(2) Additional Insured

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

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers
- David Evans and Associates, Inc.
- RJC Engineering, PLLC
- HWA Geosciences, Inc.

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor

are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

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

1-07.18(3) Subcontractors

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

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

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

1-07.18(4) Verification of Coverage

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

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

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

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be

construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

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

1-07.18(5)A Commercial General Liability

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

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

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

Such policy must provide the following minimum limits:

$1,000,000 Each Occurrence
$2,000,000 General Aggregate
$2,000,000 Products & Completed Operations Aggregate
$1,000,000 Personal & Advertising Injury each offence
$1,000,000 Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

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

Such policy must provide the following minimum limit:

$1,000,000 Combined single limit each accident

1-07.18(5)C Workers' Compensation

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

(January 4, 2016 APWA GSP)

1-07.18(5)D Excess or Umbrella Liability

The Contractor shall provide Excess or Umbrella Liability insurance with limits of not less than **$2,000,000** each occurrence and annual aggregate. This excess or umbrella liability coverage shall be excess over and as least as broad in coverage as the Contractor's Commercial General and Auto Liability insurance

All entities listed under 1-07.18(2) of these Special Provisions shall be named as additional insureds on the Contractor's Excess or Umbrella Liability insurance policy.

This requirement may be satisfied instead through the Contractor's primary Commercial General and Automobile Liability coverages, or any combination thereof that achieves the overall required limits of insurance.

(January 1, 2016 COK GSP)
1-07.23 Public Convenience and Safety

Section 1-07.23 is supplemented with the following:

No road or street shall be closed to the public except as permitted in these plans and specifications or with the approval of the Engineer and proper governmental authority. Fire hydrants on or adjacent to the work shall be kept accessible to fire fighting equipment at all times. Provision shall be made by the Contractor to ensure the proper functioning of all gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses, and storm sewer facilities throughout the project. Temporary interruption of service will be allowed only with the permission of the Engineer.

The Kirkland Police Department and Kirkland Fire Department shall be notified at least four (4) hours in advance of any actions by the Contractor that may affect the functions of either the Police Department or Fire Department.

The Contractor shall conduct its work and take preventative measures so that dust or other particulate matter in the project area shall not become objectionable to the adjacent property owners or general public. Should the Owner determine the Contractor is not fulfilling its obligation in this regard; the Owner reserves the right to take such action as may be necessary to remedy the objectionable condition and to charge the Contractor with any cost that may be incurred in such remedial action. All work shall be carried on with due regard for the safety of the public. No driveway, whether public, commercial, or private, may be closed without prior approval of the Owner, project supervisor, or Engineer unless written authority has been given by the affected property owner. The Contractor shall be responsible for notifying the affected property owners 24 hours in advance of scheduled interruptions to access.

(January 1, 2016 COK GSP; may not be used on FHWA-funded projects; note optional/conditional nature of use for other City projects))

Pedestrian Control and Protection

When the work area encroaches upon a sidewalk, walkway or crosswalk area, special consideration must be given to pedestrian safety. Maximum effort must be made to separate pedestrians from the work area. Protective barricades, fencing, and bridges, together with warning and guidance devices and signs, shall be utilized so that the passageway for pedestrians is safe and well defined. Whenever pedestrian walkways are provided across excavations, they shall be provided with suitable handrails. Footbridges shall be safe, strong, free of bounce and sway, have a slip resistant coating, and be free of cracks, holes, and irregularities that could cause tripping. Ramps shall be provided at the entrance and exit of all raised footbridges, again to prevent tripping. Adequate illumination and reflectorization shall be provided during hours of darkness. All walkways shall be maintained with at least 4 feet clear width.

Where walks are closed by construction, an alternate walkway shall be provided, preferably within the planting strip.

Where it is necessary to divert pedestrians into the roadway, barricading or channeling devices shall be provided to separate the pedestrian walkway from the adjacent vehicular traffic lane. At no time shall pedestrians be diverted into a portion of a street used concurrently by moving vehicular traffic.

At locations where adjacent alternate walkways cannot be provided, appropriate signs shall be posted at the limits of construction and in advance of the closure at the nearest crosswalk or intersection to divert pedestrians across the street.

Physical barricades shall be installed to prevent visually impaired people from inadvertently entering a closed area. Pedestrian walkways shall be wheelchair accessible at all times. Pedestrian access shall be maintained to all properties adjacent to the construction site.

(July 23, 2015 APWA GSP)

1-07.24 Rights of Way

Delete this section and replace it with the following:

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

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

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

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

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

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property

owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

(January 1, 2021 COK GSP)

In addition to all agreements and releases between the Contractor and private property owner(s) described in this Section and as required in Section 1-07.6(2), the Contractor shall apply for a City of Kirkland Temporary Use Permit from the City of Kirkland Planning and Building Department for any temporary uses of real property (including both private property and City-owned real property) for temporary construction facilities, storage of materials, or other Contractor needs.

The Contractor shall file with the Engineer signed property release forms (in the format as detailed below) for all properties disturbed or damaged by the Contractor's operations.

PROPERTY RELEASE

_____
_____
_____
(Contractor's name and address)

DATE: _____

I, _____ owner of _____, hereby release _____, *(Contractor's name)* from any property damage or personal injury resulting from construction on or adjacent to my property located at _____ during construction of the _____. My signature below is my acknowledgment and acceptance that my property, as identified above, was returned to a satisfactory condition.

Signed: _____
Name: _____
Address: _____
_____
Phone: _____

1-08 PROSECUTION AND PROGRESS

Add the following new section:

(May 25, 2006 APWA GSP)

1-08.0 Preliminary Matters

Add the following new section:

(October 10, 2008 APWA GSP)

1-08.0(1) Preconstruction Conference

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

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

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

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

(January 1, 2021 COK GSP; may not be used on FHWA-funded projects)

Add new Section 1-08.0(2).

1-08.0(2) Hours of Work

Except in the case of emergency, unless otherwise indicated in the Contract Documents, or unless otherwise approved by the Contracting Agency in advance, the allowable working hours for this Contract Work shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day. A maximum 1-hour lunch break is allowable between 7:00 a.m. and 6:00 p.m. and does not count for purposes of the 8-hour working period. The Contract assumes a 5-day work week, exclusive of weekends and holidays observed by the City of Kirkland and identified in Section 1-08.5 of the Standard Specifications.

The normal straight time 8-hour working period for the contract shall be established at the preconstruction conference or prior to the Contractor commencing the Work.

Except in the event of an emergency, unless otherwise indicated in the Contract Documents, or unless otherwise approved in advance by the Contracting Agency (including the Contractor obtaining approval for all applicable City of Kirkland permits as required by the City of Kirkland Zoning Code), no Work shall be allowed between the hours of 6:00 p.m. and 7:00 a.m., during weekends (except driveway construction), or during holidays observed by the City of Kirkland and identified in Section 1-08.5 of the Standard Specifications.

The Contracting Agency may consider specific and limited requests by the Contractor to allow Work during one or more periods in which Work is not allowed by this Section, but approval of these requests is solely at the discretion of the Contracting Agency as a benefit to the general public. Contractor shall submit a request in writing to the Engineer, including a full and accurate explanation of the type(s) of work to be performed, the period or periods of time outside normal Work hours, and the explanation(s) for why this work cannot be performed during the allowable Work hours.

The Engineer will consider requests and determine conditions and limitations as the Engineer deems necessary, in conformance with the conditions of support for local permitting described in Section 1-07.6 of the Standard Specifications and these Special Provisions. These conditions and limitations are additional to any conditions or limitations that may be required by Contracting Agency permits and/or variances. These conditions may include, but are not limited to:

1. Require the Engineer or such assistants as the Engineer may deem necessary to be present during the Work, including (but not limited to):

    a. Survey crews

    b. Personnel from the Contracting Agency's material testing laboratory

    c. Inspectors

    d. City operations and maintenance staff

    e. Police, fire, or other public safety officials

    f. Any other Contracting Agency employees who, in the opinion of the Engineer, are a necessary presence for the Work outside of the allowable working hours;

2. Require the Contractor to reimburse the Contracting Agency for all additional costs and expenses in excess of straight-time costs incurred for Contracting Agency employees and expenses during such times;

3. Measure Work performed on nights, weekend days, and holidays as working days with regards to the Contract Time; and/or,

4. Consider multiple work shifts (such as a sequential 8-hour day period followed by an 8-hour night period) as multiple working days with respect to Contract Time, even if those multiple shifts occur in a single 24-hour period.

If the Engineer approves the Contractor's written request and all conditions and/or restrictions the Engineer applies to that approval are acceptable by the Contractor, the Contractor shall be responsible for obtaining work hours and noise variances as required by Section 1-07.6. The Contractor shall apply to the City of Kirkland Planning and Building Department using http://mybuildingpermit.com. The Engineer can provide supporting documentation, as deemed appropriate by the Engineer, to the Contractor for submission with this application.

Unless otherwise indicated in the Contract Documents or indicated by the Engineer in writing, no claims for equitable adjustments of Contract will be allowed for review and approval time frames for the Contractor to obtain approval for requests to Work outside the approved working hours in this Section. No claims for equitable adjustments of the Contract will be allowed for requirements, including limitations, in approvals to work outside of the allowed working hours in this Section.

Approved Work outside the allowable working hours in this Section is subject to additional noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Contracting Agency's noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor's operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

Arterial Streets

No work will be performed on arterial streets during the peak traffic hours of 5:00 a.m. – 9:00 a.m. and 3:00 p.m. – 7:00 p.m., except emergency work to restore services, unless a

City-approved traffic control plan allows work during the peak hours. The following streets are classified as arterials:

STREET	***FROM***	***TO***
Central Way/NE 85th St	Market St	132nd Ave NE
Juanita Dr NE /NE Juanita Dr	NE 143rd St (City Limits)	98th Ave NE
Juanita Woodinville Way	100th Ave NE	NE 145th St (City Limits)
Lake St/Lake Washington Blvd/Northup Wy	Central Way	Northup Way (City Limits)
Kirkland Ave/Kirkland Way	Lake St	NE 85th St
Lakeview Dr /NE 68th St/NE 70th St	Lake Washington Blvd	132nd Ave NE
Market St/98th Ave NE/100th Ave NE	Central Way	NE 145th St (City Limits)
NE 116th St	98th Ave NE	Slater Ave NE
NE 120th St/132nd Ave NE	Slater Ave NE	NE 60th St (City Limits)
NE 124th St	100th Ave NE	East City Limits
NE 128th St	116th Ave NE/116th Way NE	120th Ave NE
Simonds Rd NE	92nd Ave NE (City Limits)	100th Ave NE
Slater Ave NE	NE 116th St	NE 124th St
Totem Lake Blvd	NE 132nd St	124th Ave NE
3rd Street/State Street	Central Way	NE 68th Street/Lakeview Dr.
6th St/6th St S/108th Ave NE	Central Way/NE 85th St	South City Limits
90th Ave NE/NE 131st Way/NE 132nd St	NE 134th St	132nd Ave NE
120th Ave NE/116th Ave NE/116th Way NE	NE 112th St	NE 132nd St
124th Ave NE	NE 85th St	NE 124th St
124th Ave NE	NE 132nd St	NE 145th Pl (City Limits)
132nd Ave NE	NE 110th Pl	NE 113th Pl

(December 30, 2022 APWA GSP, Option B*; may not be used on FHWA-funded projects*)

1-08.1 Subcontracting

Delete the ninth paragraph, beginning with “On all projects, the Contractor shall certify…”.

(January 1, 2016 COK GSP)

1-08.1 Subcontracting

Section 1-08.1 is supplemented with the following:

A Subcontractor or an Agent to the Subcontractor will not be permitted to perform any work under the contract until the following documents have been completed and submitted to the Engineer:

1. Request to Sublet Work (form 421-012).
2. Statement of Intent to Pay Prevailing Wages (Form 700-029-000).

The Contractor's records pertaining to the requirements of this Special Provision shall be open to inspection or audit by representatives of the Department during the life of the contract and for a period of not less than three years after the date of acceptance of the contract. The Contractor shall retain these records for that period. The Contractor shall also guarantee that these records of all Subcontractors and Agents shall be open to similar inspection or audit for the same period.

1-08.1(7)A Payment Reporting
(January 4, 2024 APWA GSP

Revise this section to read: “Vacant”.

(January 1, 2016 COK GSP)

1-08.3 Progress Schedule

The order of work will be at the Contractor's option, in keeping with good construction practice and the terms of the contract. All work shall be carried out in accordance with the requirements of the City of Kirkland in compliance with the plans and specifications. However, the Contractor shall so schedule the work within the time constraints noted in the various contract documents, including any permits. The Contractor is cautioned to review said documents and permits and schedule the work appropriately as no additional compensation will be made to the Contractor due to the time constraints imposed by such documents.

(December 30, 2022 APWA GSP)

1-08.3(2)A Type A Progress Schedule

Revise this section to read:

The Contractor shall submit three (3) copies of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

(July 23, 2015 APWA GSP)

1-08.4 Prosecution of Work

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

1-08.4 Notice to Proceed and Prosecution of Work

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The

Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

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

(December 30, 2022 APWA GSP, Option B)

1-08.5 Time for Completion

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day (in the field) following the forty-five (45) calendar day after the Notice to Proceed date. If the Contractor starts work on the project at an earlier date, then contract time shall begin on the first working day when onsite work begins.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and all partial or whole days the Engineer declares as unworkable. The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day, then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

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

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (per Section 1-07.9(5)).
   b. Material Acceptance Certification Documents

c.
d. Final Contract Voucher Certification
e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all subcontractors
f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
g. Property owner releases per Section 1-07.24

(January 1, 2016 COK GSP)

Section 1-08.5 is supplemented with the following:

This project shall be substantially completed in its entirety within 100 working days.

(January 1, 2016 COK GSP)

1-08.9 Liquidated Damages

The third paragraph of Section 1-08.9 is revised to read as follows:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and

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

LIQUIDATED DAMAGES FORMULA

For C > $50,000 → LD = 0.15 × C ÷ T, and
For C ≤ $50,000 → LD = 0.30 × C ÷ T.

Where:
LD = liquidated damages per working day (rounded to the nearest dollar)
C = original Contract amount
T = original time for Physical Completion

1-09 MEASUREMENT AND PAYMENT

1-09.2 Weighing Equipment

(December 30, 2022 APWA GSP, Option 2)
1-09.2(1) General Requirements for Weighing Equipment

Revise item 4 of the fifth paragraph to read:

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

(January 1, 2016 COK GSP)

1-09.2(1) General Requirements for Weighing Equipment

The second to last paragraph of Section 1-09.2(1) is supplemented with the following:

Trucks and Tickets

All tickets shall, at a minimum, contain the following information:

7. Ticket serial number
8. Date and hour of weighing
9. Weigher's identification

Duplicate tally tickets shall be prepared to accompany each truckload of materials delivered to the project.

It is the responsibility of the Contractor to see that tickets are given to the Inspector on the project for each truckload of material delivered. Pay quantities will be prepared on the basis of said tally tickets, delivered to the Inspector at time of delivery of materials. Tickets not collected at the time of delivery will not be honored for payment.

(December 30, 2022 APWA GSP)
1-09.2(5) Measurement

Revise the first paragraph to read:

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

(December 30, 2022 APWA GSP)

1-09.6 Force Account

Supplement this section with the following:

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

(December 30, 2022 APWA GSP)

1-09.7 Mobilization

Delete this Section and replace it with the following:

Mobilization consists of preconstruction expenses and the costs of preparatory Work and operations performed by the Contractor typically occurring before 10 percent of the total original amount of an individual Bid Schedule is earned from other Contract items on that Bid Schedule. Items which are not to be included in the item of Mobilization include but are not limited to:

1. Portions of the Work covered by the specific Contract item or incidental Work which is to be included in a Contract item or items.
2. Profit, interest on borrowed money, overhead, or management costs.
3. Costs incurred for mobilizing equipment for force account Work.

Based on the lump sum Contract price for "Mobilization", partial payments will be made as follows:

1. When 5 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 50 percent of the Bid Item for mobilization on that original Bid Schedule, 5 percent of the total of that original Bid Schedule, or 5 percent of the total original Contract amount, whichever is the least, will be paid.
2. When 10 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 100 percent of the Bid Item for mobilization on that original Bid Schedule, 10 percent of the total of that original Bid Schedule, or 10 percent of the total original Contract amount, whichever is the least, will be paid.
3. When the Substantial Completion Date has been established for the project, payment of any remaining amount Bid for mobilization will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

(March 13, 2012 APWA GSP)

1-09.9 Payments

Supplement this section with the following:

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

(December 30, 2022 APWA GSP)

1-09.9 Payments

Section 1-09.9 is revised to read:

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

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

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

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

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

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

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

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

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

Failure to perform obligations under the Contract by the Contractor may be decreed by the Contracting Agency to be adequate reason for withholding any payments until compliance is achieved.

Upon completion of all Work and after final inspection (Section 1-05.11), the amount due the Contractor under the Contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Contract Voucher Certification to be signed by the Contractor. The Contractor's signature on such voucher shall be deemed a release of all claims of the Contractor unless a Certified Claim is filed in accordance with the requirements of Section 1-09.11 and is expressly excepted from the Contractor's certification on the Final Contract Voucher Certification. The date the Contracting Agency signs the Final Contract Voucher Certification constitutes the final acceptance date (Section 1-05.12).

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required for completion and final acceptance of the Contract, the Contracting Agency reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a Completion Date and unilateral final acceptance will be provided by email with delivery confirmation from the Contracting Agency to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the email with delivery confirmation is received by the Contractor. The date the Contracting Agency unilaterally signs the Final Contract Voucher Certification shall constitute the Completion Date and the final acceptance date (Section 1-05.12). The reservation by the Contracting Agency to

unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the Contracting Agency does not in any way relieve the Contractor of their responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

Payment to the Contractor of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

(January 1, 2016 COK GSP)

Unless otherwise agreed to by both parties, the work period shall coincide with the calendar month. A check will be mailed or made available to the Contractor no later than thirty (30) days following the last day of the work period.

(December 30, 2022 APWA GSP)

1-09.11(3) Time Limitation and Jurisdiction

Revise this section to read*:*

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

(January 19, 2022 APWA GSP)

1-09.13(1) General

Revise this section to read:

Prior to seeking claims resolution through arbitration or litigation, the Contractor shall proceed in accordance with Sections 1-04.5 and 1-09.11. The provisions of Sections 1-04.5 and 1-09.11 must be complied with in full as a condition precedent to the Contractor's right to seek claim resolution through binding arbitration or litigation.

Any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be resolved, as prescribed herein, through binding arbitration or litigation.

The Contractor and the Contracting Agency mutually agree that those claims or causes of action which total $1,000,000 or less, which are not resolved by mediation, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

The Contractor and the Contracting Agency mutually agree that those claims or causes of action in excess of $1,000,000, which are not resolved by mediation, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13 Claims Resolution

(February 1, 2021 COK GSP)Option B

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

Delete this Section and replace it with the following:

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

(November 30, 2018 APWA GSP)

1-09.13(3)A Administration of Arbitration

Revise the third paragraph to read:

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

(December 30, 2022 APWA GSP)

1-09.13 (4) Venue for Litigation

Revise this section to read:

Litigation shall be brought in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. It is mutually agreed by the parties that when litigation occurs, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-10 TEMPORARY TRAFFIC CONTROL

(January 1, 2016 COK GSP)

1-10.2 Traffic Control Management

1-10.2(2) Traffic Control Plans

The first and second sentences of Section 1-10.2(2) are deleted and replaced with the following:

The Contractor shall submit a traffic control plan or plans showing a method of handling traffic including pedestrian and bicycle traffic. All construction signs, flaggers, spotters and

other traffic control devices shall be shown on the traffic control plan(s) except for emergency situations.

(May 16, 2006 COK GSP)
1-10.3 Traffic Control Labor, Procedures, and Devices

(April 18, 2018 COK GSP)

1-10.3(3)C Portable Changeable Message Sign

Supplement this section with the following:

Three Portable Changeable Message Signs (PCMS) shall be provided for the duration of the project. Proposed locations shall be shown on Traffic Control Plan(s) submitted by the contractor. Contractor shall submit proposed message(s) to be displayed and receive approval by the Engineer prior to placement. Contractor is responsible for programming of the approved message into the PCMS('s), set-up, placement, and removal upon project completion.

1-10.5 Payment

(December 30, 2022 APWA GSP)

1-10.5(1) Lump Sum Bid for Project (No Unit Items)

Revise the pay item name to read:

"Project Temporary Traffic Control, min. Bid $5,000, lump sum.

(May 16, 2006 COK GSP)
1-10.5(3) Reinstating Unit Items with Lump Sum Traffic Control

Supplement this Section with the following:

"Project Temporary Traffic Control", lump sum.

Costs for layout, installation, removal, and transport of project signage shall be included with the Contract lump sum price for "Project Temporary Traffic Control." This Bid item shall also constitute full compensation for all labor, tools, equipment, and materials necessary and incidental to maintaining temporary driving surface as required by Section 1-07.23(1), traffic and pedestrian control as required throughout the project duration in compliance with the MUTCD including, but not limited to, reflective signage, barricades, lights, traffic cones, and temporary pavement markings. Providing a minimum of two (2) flaggers and one (1) Traffic Control Supervisor during all periods of construction activities shall be included in the lump sum Bid item "Project Temporary Traffic Control".

Providing, operating, and maintaining three (3) Portable Changeable Message Signs from 7 calendar days prior to the start of construction and throughout the project duration shall be included in the lump sum Bid item "Project Temporary Traffic Control".

No separate payment will be made for preparation of the Traffic Control or Detour Plans. All costs for developing, updating, and implementing Traffic Control or Detour Plans shall be included in "Project Temporary Traffic Control".

No separate payment will be made for materials used to maintain temporary traffic that are not incorporated into the final improvements. Such materials shall be included in and considered incidental to “Project Temporary Traffic Control”.

All costs for minimizing drop-offs and maintaining access to existing streets and driveways including, but not limited to, steel sheeting, and channelization devices, shall be included by the Contractor in the lump sum Bid price for “Project Temporary Traffic Control”. No additional or separate compensation will be allowed.

The Lump Sum bid item for “Project Temporary Traffic Control” shall cover the cost to provide temporary traffic control for the for each and every working day (the entire contract duration) allowed as defined in Section 1-08.5 of these Special Provisions. The total allowable working days defined for this contract includes sufficient time to complete all work associated with items paid as “Minor Change” and/or as other Force Account items. Should the Contractor complete the work in fewer working days than allowed the Contract Lump Sum item will be paid in full and shall be consider an incentive to the Contractor for early completion.

For additional working days approved via a change order for work that is not identified to be paid by force account, the daily cost for Project Temporary Traffic Control shall be determined by dividing the lump sum Contract price for “Project Temporary Traffic Control” by the original allowed contract working days as defined in Section 1-08.5 of these Special Provisions.

END OF DIVISION 1

GSP DIVISION 2

City of Kirkland

DIVISION 2 – EARTHWORK

(February 17, 2022 COK GSP)
2-01.3(1) Clearing

This Section is supplemented with the following:

8. Trees removal shall be performed in a manner that does not damage overhead utilities. The Contractor shall coordinate tree removal activities with the affected utility companies, including meeting all applicable requirements.

(January 1, 2020 COK GSP)
2-01.3(2) Grubbing

This Section is supplemented with the following:

3. Remove stumps of removed trees by grinding. Contractor shall grind stumps to a minimum of 12 inches below either the existing or final ground surface elevation, whichever is lower. The Contractor shall coordinate stump removal activities with the affected utility companies, including meeting all applicable requirements.

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

Supplement this Section with the following:

The contractor shall perform all sawcutting work, including the containment, collection, and disposal of sawcutting debris and wastewater, in accordance with Section 1-07.5(3).

2-02.3(5) Monitoring Well Decommissioning

This Section is added in its entirety:

Prior to road surface restoration, the existing groundwater monitoring well shown on the plans shall be decommissioned in accordance with Department of Ecology requirements in place at the time of removal. Contractor or subcontractor shall be responsible for filing Notice of Intent to Decommission a Well form through the Department of Ecology website. State Law requires decommissioning only by licensed well drillers. See http://www.ecy.wa.gov/programslvvr/wells/abandon-wells.html for more information. Materials for

abandoning groundwater observations wells shall conform to the requirements of 173-160-460 WAC.

2-02.5 Payment

Supplement this Section with the following:

“Sawcutting Pavement – Up to 8 In. Thick,” per linear foot.

“Decommissioning Monitoring Well” per each.

Sawcutting pavement shall be measured and paid only once, for final permanent trench restoration or permanent curb restoration. Pavement cutting and/or removal by any means prior to sawcutting for permanent restoration shall be incidental to the work.

END OF DIVISION 2

GSP DIVISION 4

City of Kirkland

DIVISION 4 – BASES

4-04 BALLAST AND CRUSHED SURFACING

4-04.1 Description

Delete the second paragraph of 4-04.1 and substitute the following:

Work shall also consist of placing crushed surfacing stone as driveway maintenance material and in gravel driveway restoration as shown on the Plans or directed by the Engineer. The quantity shown in the Proposal is an estimate for the purpose of establishing a unit price only. Actual quantities will be measured as construction progresses. The Engineer may require that some or all of the crushed surfacing be removed because of contamination or to meet final grades. Removal shall be included with work for "Crushed Surfacing Top Course" or "Crushed Surfacing Base Course."

END OF DIVISION 4

GSP DIVISION 5

City of Kirkland

DIVISION 5– SURFACE TREATMENTS AND PAVEMENTS

DIVISION 5 – SURFACE TREATMENTS AND PAVEMENTS

5-04 HOT MIX ASPHALT

Delete 5-04 and substitute the following:

5-04.1 Description

Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

Provide HMA composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

5-04.2 Materials

Provide materials meeting the requirements of the following sections:

Asphalt Binder	9-02.1(4)	Standard Specifications
Cationic Emulsified Asphalt	9-02.1(6)	Standard Specifications
Anti-Stripping Additive	9-02.4	Standard Specifications
HMA Additive	9-02.5	Standard Specifications
Aggregates	9-03.8	Standard Specifications
Recycled Asphalt Pavement	9-03.8(3)B	Standard Specifications
Mineral Filler	9-03.8(5)	Standard Specifications
Recycled Material	9-03.21	Standard Specifications
Portland Cement	9-01	Standard Specifications
Sand	9-03.1(2)	Standard Specifications
(As noted in 5-04.3(5)C for crack sealing)		
Joint Sealant	9-04.2	Standard Specifications
Foam Backer Rod	9-04.2(3)A	Standard Specifications

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. Sample and test the RAP at a frequency of one sample for every 1,000 tons produced and not less than two samples per project. Report the asphalt content and gradation test data to the City when submitting the mix design for approval on the QPL. Include the RAP as part of the mix design as defined in these Specifications.

Provide the grade of asphalt binder as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. Submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

For production of aggregates comply with the requirements of Section 3-01.

For preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles comply with the requirements of Section 3-02.

5-04.2(1) How to Get an HMA Mix Design on the QPL

If the contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design – Obtaining Project Approval

Do NOT begin paving prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the Contract Documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, paths, trails, and pavement repair. Obtain approval from Project Engineer for other nonstructural applications of HMA accepted by commercial evaluation. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Provide fifteen days prior to the first day of paving one of the following mix design verification certifications for City review;

a. The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
b. The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
c. The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.**

**The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

a. Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
b. Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, City may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation: Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the City for mix design approval is not required.

For the Bid Item Commercial HMA, select a class of HMA and design level of Equivalent Single Axle Loads (ESAL's) appropriate for the required use.

5-04.2(2)B Using Warm Mix Asphalt Process

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

a. Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
b. Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer. Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified in Table 1, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Table 1 - Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55◦F	45◦F
0.10 to .20	45◦F	35◦F
More than 0.20	35◦F	35◦F

5-04.3(2) Paving Under Traffic

Apply the requirements of this Section when the Roadway being paved is open to traffic. Keep intersections open to traffic at all times, except; when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, place advance warning signs and signs marking the detour or alternate route.

During paving operations, maintain temporary pavement markings throughout the project. Install temporary pavement markings on the Roadway prior to opening to traffic. Provide temporary pavement markings in accordance with Section 8-23.

Include all costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

Provide plants used for the preparation of HMA conforming to the following requirements:

Equipment for Preparation of Asphalt Binder – Equip tanks for the storage of asphalt binder to heat and hold the material at the required temperatures. Accomplish the heating by steam coils, electricity, or other approved means so that no flame is in contact with the storage tank. Provide the circulating system for the asphalt binder designed to ensure proper and continuous circulation during the operating period. Provide a valve for the purpose of sampling the asphalt binder placed in either the storage tank or in the supply line to the mixer.

Thermometric Equipment – Provide an armored thermometer, capable of detecting temperature ranges expected in the HMA mix, fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit and location convenient and safe for access by Inspectors. Provide plant equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. Provide device in full view of the plant operator.

Heating of Asphalt Binder – Provide heating so the temperature of the asphalt binder does not exceed the maximum recommended by the asphalt binder manufacturer nor be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. Provide method to heat the asphalt binder in a manner that will avoid local variations in heating and provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.

Sampling and Testing of Mineral Materials – Provide HMA plant equipped with a mechanical sampler for the sampling of the mineral materials meeting the requirements of Section 1-05.6 for the crushing and screening operation. Provide for the setup and operation of the field testing facilities of the City as provided for in Section 3-01.2(2).

Sampling HMA – Provide for sampling HMA by one of the following methods:

A mechanical sampling device attached to the HMA plant.

Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

Provide trucks used for hauling HMA having tight, clean, smooth metal beds and a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Securely attach cover whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes to protect the HMA.

Provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Drain excess release agent prior to filling hauling equipment with HMA. Do NOT use petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

Provide HMA pavers that are self-contained, power-propelled units, with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

Provide HMA paver in good condition and have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed in good condition and in working order. Provide equipment certification listing the make, model, and year of the paver and note retrofitting of any equipment.

Operate the screed in accordance with the manufacturer's recommendations and so it effectively produces a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. Provide a copy of the manufacturer's recommendations upon City's request. Extensions producing the same results, including ride, density, and surface texture as obtained by the primary screed will be allowed. Do NOT use extensions without augers and an internally heated vibratory screed in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Place lines on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. Control the grade and slope for intermediate lanes automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and

smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

Furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Thoroughly remove any cleaning or solvent type liquids spilled on the pavement before paving proceeds.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

Provide a Material Transfer Device/Vehicle (MTD/V) with the Engineer's approval, unless otherwise required by the Contract.

Where an MTD/V is required by the contract, the Engineer may approve paving without an MTD/V, at the Contractor's request. The Engineer will determine if an equitable adjustment in cost or time is due.

Mix the MTD/V when used with the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Sufficiently mix the HMA to obtain a uniform temperature throughout the mixture. The length of the windrow for windrow elevator may be limited in urban areas or through intersections at the discretion of the Engineer.

To be approved for use, provide an MTV meeting the following:

- Self-propelled vehicle, separate from the hauling vehicle or paver.
- Not be connected to the hauling vehicle or paver.
- May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
- Ability to mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
- Ability to mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, provide an MTD meeting the following:

- Ability to be positively connected to the paver.
- May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
- Ability to mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
- Ability to mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

5-04.3(3)E Rollers

Provide vibratory, oscillatory steel wheel rollers, or pneumatic tire type rollers, in good condition and capable of reversing without backlash. Operate roller in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. Provide sufficient number and weight of rollers to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results will not be permitted.

5-04.3(4) Preparation of Existing Paved Surfaces

Bring any irregular existing pavement surface or old base surface to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Accomplish preleveling of uneven or broken surfaces over which HMA is to be placed by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Provide compaction of preleveling HMA to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Provide Engineer approved compaction equipment used for the compaction of preleveling HMA.

Clean the entire surface of the pavement before construction of HMA on an existing paved surface. Entirely remove all fatty asphalt patches, grease drippings, and other objectionable matter from the existing pavement. Thoroughly clean all pavements or bituminous surfaces of dust, soil, pavement grindings, and other foreign matter. Fill all holes and small depressions with an appropriate class of HMA. Level and thoroughly compact the patched area surface. Obtain Engineer approval of the surface prior to the application of tack coat or paving.

Apply an asphalt tack coat to all paved surfaces that HMA is to be placed or abutted; except, that tack coat may be omitted from clean, newly paved surfaces at the Engineer's discretion. Uniformly apply tack coat to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. Obtain application rate approval from Engineer. Apply a heavy application of tack coat to all joints. For Roadways open to traffic, limit the application of tack coat to surfaces that will be paved during the same working shift. Provide spreading equipment equipped with a thermometer to indicate the temperature of the tack coat material.

Do NOT allow equipment to operate on tacked surfaces until the tack has broken and cured. Repair tack coat if the Contractor's operation damages the tack coat prior to placement of the HMA.

Provide tack coat consisting of CSS-1 or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. Provide tack coat having sufficient temperature such that it may be applied uniformly at the specified rate of application and not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer, mix the HMA until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

Ensure the temperature of the HMA when discharged does not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, ensure the discharge temperature of the HMA does not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, reduce the moisture content in accordance with Engineer's directions.

Storing or holding of the HMA in approved storage facilities for less than 24 hours will be permitted with Engineer's approval. Engineer will reject HMA held for more than 24 hours after mixing. Dispose of rejected HMA at no expense to the City. Provide the storage facility having an accessible device, indicating the amount of material in storage, located at the top of the cone or about the third point. Engineer will NOT accept HMA from the storage facility when the HMA in storage is below the top of the cone of the storage facility; except, as the storage facility is being emptied at the end of the working shift.

Size recycled asphalt pavement (RAP) utilized in the production of HMA prior to entering the mixer to produce a uniform and thoroughly mixed HMA. If there is evidence of the recycled asphalt pavement not breaking down during the heating

and mixing of the HMA, immediately suspend the use of the RAP until Engineer approves changes necessary to provide adequate RAP breakdown and mixing. After introducing the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator into the mixer, mix the HMA until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

Lay the mixture upon an approved surface, spread, and strike off to the established grade and elevation. Provide HMA pavers complying with Section 5-04.3(3) to distribute the mixture. Unless Engineer directs otherwise, provide the nominal compacted layer depth to NOT exceed the following:

HMA Class	Course	Maximum Compacted Layer Depth (FT)
1 inch	NA	0.35
3/4 & 1/2 inch	Wearing	0.30
3/4 & 1/2 inch	Other	0.35
3/8 inch	NA	0.15

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, place the material produced for each JMF using separate spreading and compacting equipment. Do NOT intermingle HMA produced from more than one JMF. During a work shift place each strip of HMA to a single JMF established for the class of HMA specified, unless there is a need to make an adjustment in the JMF.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the Engineer's option.

5-04.3(9) HMA Mixture Acceptance

Engineer will use nonstatistical, or commercial evaluation for determining acceptance of HMA.

Engineer will use nonstatistical evaluation for the HMA acceptance, unless Contract specifies Commercial Evaluation.

Engineer will use Commercial evaluation for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, paths, trails, temporary pavement, and pavement repair. Engineer will need to approve other nonstructural applications of HMA accepted by commercial evaluation. Sampling and testing of HMA accepted by commercial evaluation will be at the Engineer's option.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the Engineer's approval and may be made in accordance with this section.

5-04.3(9)A HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – Provide mixture at the time of acceptance within the following tolerances:

For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2.

Property	Non-Statistical Evaluation	Commercial Evaluation

Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

For Aggregates in the mixture:

a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires Engineer's approval. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

a. **Aggregates** – 2 percent for the aggregate passing the 1½″, 1″, ¾″, ½″, ⅜″, and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. Provide the adjusted JMF within the range of the control points in Section 9-03.8(6).

b. **Asphalt Binder Con**tent – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content is 0.3 percent.

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

The City will evaluate the HMA mixture accepted by Nonstatistical Evaluation by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design being tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot will be equal to one day's production or 800 tons, whichever is less; except, the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

Collectively evaluate all test results obtained from the acceptance samples from a given lot. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Perform sampling and testing for evaluation on the frequency of one sample per sublot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Obtain samples for acceptance testing when ordered by the Engineer. Sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. Take a minimum of three samples for each class of HMA placed on a project. If used in a structural application, test at least one of the three samples taken.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the Engineer's discretion.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, preform a minimum of one acceptance test. In all cases, obtain a minimum of three samples at the point of acceptance. Test a minimum of one of the three samples for conformance to the JMF:

If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of Va will be the City's option. If tested, compliance of Va will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(10) HMA Compaction Acceptance

Compact HMA mixture accepted by nonstatistical evaluation being used in traffic lanes; including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). Use WSDOT FOP for AASHTO T 729 to determine maximum density. The specified level of density attained will be determined by the evaluation of the density of the pavement. Use WSDOT FOP for WAQTC TM 8 to determine the density of the pavement; except, Engineer will have discretion regarding gauge correlation using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the City uses a nuclear density gauge to determine density, the City will use the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the City or the Contractor in accordance with WSDOT SOP 734. Provide minimum 4-inch core diameter, unless Engineer approves otherwise. The City will test Roadway cores in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item "Roadway Core", obtain the cores in the presence of the Engineer on the same day the mix is placed and at Engineer designated locations. If the Contract does not include the Bid item "Roadway Core", then the City will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Compact HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above on the basis of a test point evaluation of the compaction train. Perform the test point evaluation

in accordance with instructions from the Engineer. Use the number of passes with an approved compaction train required to attain the maximum test point density on all subsequent paving.

Thoroughly compact HMA for preleveling. Compact HMA used for preleveling wheel rutting with a pneumatic tire roller unless Engineer approves otherwise.

5-04.3(10)A Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When City takes cores at the Contractor's request, the City must receive request by noon of the next workday after the Contractor is provided with nuclear density test results for the sublot. City will obtain core(s) from locations outside of wheel paths and as the Engineer determines. Provide traffic control in accordance with Engineer's direction. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. If the CPF for the lot based on the results of the HMA cores is less than 1.00, the City will deduct the cost for the coring from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core. In addition, the cost of the traffic control will also be the Contractor's responsibility.

5-04.3(10)B HMA Compaction – General Compaction Requirements

Compact mixture only when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Compact areas inaccessible to large compaction equipment by other mechanical means. Remove and replace HMA that becomes loose, broken, contaminated, shows excess or deficiency of asphalt, or is in any way defective, with new hot mix. Immediately compact to conform to the surrounding area.

Provide type of rollers and their relative position in the compaction sequence to attain the specified densities. Operate rollers shall only in the static mode when the internal temperature of the mix is less than 175°F unless Engineer approves otherwise. Do NOT operate a roller, regardless of mix temperature, in a mode that results in checking or cracking of the mat. Only operate rollers in static mode on bridge decks.

5-04.3(10)C HMA Compaction – Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density and when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)D Vacant

5-04.3(10)E HMA Nonstatistical Compaction

5-04.3(10)E1 HMA Nonstatistical Compaction – Lots and Sublots

City will perform acceptance testing on HMA compaction that is accepted by nonstatistical evaluation by dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot is equal to one day's production or 400 tons, whichever is less, except; the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

Engineer will determine the sublot locations within each density lot. For a lot in progress with a CPF less than 0.75, Contractor may request a new lot begin after the Engineer is satisfied that material conforming to the Specifications can be produced.

Compact HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above on the basis of a test point evaluation of the compaction train. Perform the test point evaluation in accordance with instructions from the Engineer. Use the number of passes with an approved compaction train required to attain the maximum test point density on all subsequent paving.

Thoroughly compact HMA for preleveling. Compact HMA used to prelevel wheel ruts with a pneumatic tire roller unless Engineer approves.

5-04.3(10)E2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

Engineer will randomly select the location of the HMA compaction acceptance tests from within each sublot, with one test per sublot.

5-04.3(10)E3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots where all sublots attain a relative density that is 92 percent of the reference maximum density the HMA, City will accept at the unit Contract price with no further evaluation. If a sublot does not attain a relative density that is 92 percent of the reference maximum density, the City will evaluate the lot in accordance with Section 1-06.2 to determine the appropriate CPF, with the maximum CPF being 1.00. However, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

City will reject defective or non-conforming Work. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Engineer has sole discretion to determine acceptability of such alternative proposals. Submit corrective action proposal for Engineer approval for rejected HMA not conforming to the requirements in Section 1-06.2(2) and this specification.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Do NOT incorporate material rejected before placement into the pavement. Remove any rejected section of Roadway.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests testing of the rejected material. If the Contractor elects to have the rejected material tested, obtain and test a minimum of three representative samples. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material and Contractor will bear the cost of sampling and testing. If the CPF is greater than or equal to 0.75, the City will bear the cost of sampling and testing. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. Engineer will obtain a minimum of three random samples of the suspect material to test. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

Engineer may reject an entire sublot suspected of being defective. When a sublot is rejected, obtain a minimum of two additional random samples from this sublot. Evaluate these additional samples and the original sublot as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

Shut down operations and do NOT resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

- When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
- When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
- When either the PFi for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

Engineer will reject an entire lot with a CPF of less than 0.75.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

Conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the

roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When resuming the Work, cut back the previously compacted mixture to produce a slightly beveled edge for the full thickness of the course.

Construct a 20H:1V temporary wedge of HMA where a transverse joint, as a result of paving or planing, is open to traffic. Separate the HMA in the temporary wedge from the permanent HMA by strips of heavy wrapping paper or other methods Engineer approves. Remove the wrapping paper and the joint. Trim to a slightly beveled edge for the full thickness of the course prior to resumption of paving. Remove and dispose of the cut away material and place new mix against the cut. Use rollers or tamping irons to seal the joint.

5-04.3(12)A2 Longitudinal Joints

Offset the longitudinal joint in any one course from the course immediately below by not more than 6 inches nor less than 2 inches. Locate all wearing course longitudinal joints at a lane line or an edge line of the Traveled Way. Construct a notched wedge joint along all longitudinal joints in the wearing surface of new HMA unless Engineer directs otherwise. Provide a notched wedge joint having a vertical edge of not less than the maximum aggregate size or more than 1/2 of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. Uniformly compact the sloped portion of the HMA notched wedge joint.

5-04.3(13) Surface Smoothness

Provide the completed surface of all courses having uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. Provide wearing course completed surface that does NOT vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. Provide the transverse slope of the wearing course completed surface that does NOT vary more than 1/4 inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, correct the pavement surface using one of the following methods:

Removal of material from high places by grinding with an approved grinding machine, or

Removal and replacement of the wearing course of HMA, or

By other method approved by the Engineer.

Carry out defect correction until there are no deviations anywhere greater than the allowable tolerances.

City will accept with a price adjustment deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results. The Engineer will deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, adjust the utility appurtenances to the finished grade prior to paving. If Contractor requests, Engineer may waive this requirement or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Include utility appurtenance adjustment discussions in the Pre-Paving planning (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Apply the fog seal prior to opening to traffic unless Engineer approves otherwise.

5-04.3(16) HMA Road Approaches

Construct HMA approaches at the locations shown in the Plans or where staked by the Engineer. Perform the Work in accordance with Section 5-04.

5-04.4 Measurement

"HMA Cl. ½" PG 64-22 for Trench and Excavation Restoration (Temporary)", per ton.

The contract unit price for "HMA Cl. ½" PG 64-22 for Trench and Excavation Restoration (Temporary)" shall be full payment for providing temporary trench and excavation patch over the given piping system or excavation areas and shall include prep of subgrade, purchase, hauling, placement, and compaction of HMA to provide a smooth, secure, driving surface. All maintenance and/or removal and replacement of temporary patch to maintain a smooth, secure, driving surface until such temporary patch is removed and replaced with permanent HMA restoration shall the responsibility of the contractor and at no additional cost to the owner.

"HMA Cl. ½" PG 64-22 for Trench and Excavation Restoration (Permanent)", per ton.

The contract unit price for "HMA Cl. ½" PG 64-22 for Trench and Excavation Restoration (Permanent)" shall be full payment for providing a permanent trench and excavation patch over the given piping system or excavation area within the travelled way, to the limits as directed by the City. The unit price shall include prep of subgrade, purchase, hauling, placement, and compaction of HMA to provide a smooth, secure, driving surface.

"HMA, CL ½" PG 64-22 2" Overlay", per ton.

The contract unit price for HMA, CL ½" PG 64-22 2" Overlay shall be full payment for providing permanent overlay hot mix asphalt pavement over the area as directed by the City. The unit price shall include preparation of surface, purchase, hauling, placement and compaction of HMA to provide a smooth, secure driving surface.

The unit prices bid shall include temporary and/or permanent adjustments to grade of existing and replacement manholes, valve boxes, monument casings, and other castings located in the area.

All HMA bid items will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Furnishing and placing asphalt and other materials for prime coat and edge and joint or crack sealing shall be considered incidental to the HMA bid items.

Replacement of all pavement marking shall be incidental to the HMA bid items. Pavement markings shall include, but not be limited to, striping, stop bars, pedestrian cross walks, traffic, and bike lane symbols, and cross striping. Furnishing and placing temporary pavement markings shall be required following placement of temporary pavement in vicinity of stop bar and following placement of all permanent pavement.

Supplement Division 5 of the Standard Specifications by adding the following:

5-06 PAVEMENT PATCHING

(******)

5-06.1 Description

This Work shall consist of the reconstruction and patching of trenches and other excavations in paved streets and other paved areas.

5-06.2 Materials

Provide materials conforming to the requirements specified for the materials in Sections 5-04 & 5- 05 of the Standard Specifications except as modified by these Special Provisions.

For HMA pavement patching provide HMA CL 1/2”, PG 64-22 as specified in Section 5-04 of the Standard Specifications.

Provide asphalt for temporary pavement patch hot mix asphalt (HMA CL 1/2”, PG 64-22).

Provide crushed surfacing top course used for pavement patching conforming to the requirements of 9-03.9(3) of the Standard Specifications.

5-06.3 Construction Requirements

5-06.3(1) General

Schedule pavement patching to accommodate the demands of traffic and perform as rapidly as possible to provide maximum safety and convenience to public traffic.

Placing and compact the trench backfill and the preparation and compaction of the subgrade in accordance with the various applicable sections of the Standard Specifications except as modified by these Special Provisions.

Before the pavement patch is to be constructed saw cut the pavement so that the marginal edges of the patch will form a rectangular shape with straight edges and vertical faces.

Provide signs, barricades, lights and other warning devices in accordance with the requirements of the "Manual on Uniform Traffic Control Devices" and they maintain 24-hours a day until the patching work is completed and ready for traffic.

Complete subgrade compaction prior to the required patching. Compact subgrade to 95-percent as determined by the ASTM D2922 (nuclear method).

5-06.3(4) HMA on Granular Base

After the Crushed Surfacing Top Course subgrade has been leveled and compacted, HMA CL 1/2”, PG 64-22 shall be placed to a thickness of one inch greater than the existing asphalt pavement depth or to a minimum of three inches, whichever is greater. Asphalt shall be compacted to 92-percent of maximum density as determined by WSDOT Test Method 705.

5-06.3(6) Temporary Pavement Patching

The Contractor shall furnish, place and maintain temporary pavement patching as shown on the Plans and at locations as directed by the Engineer, until such time as a permanent patch of permanent paving can be made.

Provide a temporary patch as required to reopen roadway during construction as that withstands existing traffic loads and volumes. Options include, and are not limited to, cold mix asphalt (MC 250), hot mix asphalt (HMA CL 1/2”, PG 64-22), or secured steel roadway plates.

Provide temporary asphalt patching where roadway or walk is needed for vehicular or pedestrian traffic, during the construction period, until permanent pavement and sidewalks can be constructed.

In the event that the temporary surface subsides after the initial placement, apply additional MC 250 or HMA (as approved by the Engineer) as necessary to maintain the surface.

Stockpile of plant mix and crushed surfacing for temporary patching shall be provided on the site by the Contractor.

Prior to final restoration of the pavement, the Contractor shall be responsible for removing and disposing of temporary pavement patching materials.

5-06.3(7) Incidental Pavement Patching

Incidental pavement patching shall be done only at the direction of the Engineer for patching and restoring areas between the back of new sidewalks and adjacent asphalt driveways, paving ramps at the ends of sidewalks, and gutters that are adjusted to grade. Asphalt for incidental pavement patching shall be HMA CL 1/2”, PG 64-22.

END OF DIVISION 5

GSP DIVISION 7

City of Kirkland

DIVISION 7 – DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

(*****)

STORM SEWERS

7-04.2 Materials

Add the following to the list of materials:

Ductile Iron (DI) Pressure Pipe (4 inches and over)	9-30.1(1)

7-04.5 Payment

Add the following to the list of Bid items:

CL 50 DI Pipe for Storm Drain 12 in. diam. per linear foot.

(*****)

MANHOLES, INLETS, AND CATCH BASINS

7-05.1 Description

Revise the first paragraph in 7-05.1 to read as follows:

This Work consists of constructing manholes, inlets, drywells, and catch basins and connecting to existing Structures of the types and sizes designated in accordance with the Plans, these Special Provisions, the Specifications, and the COK Pre-Approved Plans.

Further supplement 7-05.1 as follows:

7-05.1(1) Submittals

(******)

Provide Type 2 Working Drawings for all materials and Standard Plans.

7-05.2 Materials

Supplement 7-05.2 by adding the following at the end of the material list:

Mortar, nonshrink	9-20.3(2)	Standard Specifications
Commercial Concrete	6-02.3(2)B	Standard Specifications
Watertight Connection Boots	9-05.30	Special Provisions
Flexible Couplings	9-05.40	Special Provisions
Cementious Waterproofing	9-31	Special Provisions

7-05.3 Construction Requirements

Supplement 7-05.3 by adding the following after the last sentence of the third paragraph:

Install PAMREX, East Jordan Iron Works, or equal, hinged manhole frame and cover in accordance with manufacturer recommendations and applicable City standards and details.

Coordinate manhole cover and frame hinge location with manhole steps and traffic lanes. Hinge orientation to be determined during the shop drawing review of precast manhole structures.

Delete the tenth paragraph in 7-05.3 and revise with the following:

Provide a coat crystalline waterproofing material as defined in Section 9.31 of these Special Provisions to the exterior of all concrete manholes and the valve vault.

Revise the eleventh paragraph in 7-05.3 to read as follows:

Provide Kor-N-Seal, or equal, watertight flexible pipe to manhole connectors for pipes up to 48-inch diameter connecting to new sanitary sewer manholes. Place no pipe joint in PVC or HDPE pipe within 10-feet of the outside face of the manhole.

.

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

Delete both paragraphs of 7-05.3(1) and substitute the following:

Adjust manholes, catch basins and other structures to final grade after completing pavement operations per COK pre-approved Plan No. CK-S.26. Carefully re-establish the center of each structure from Contractor's previously established references.

Cut pavement in neat circle having a minimum diameter of 2-feet beyond the casting cover. Remove pavement and base material, maintaining the neat circle, to permit casting and frame removal. Adjust casting and frame to proper grade.

Place cast iron frame on concrete adjusting rings and wedge up to the desired grade using plastic wedges. Wood or metal wedges are not allowed. The Backfill around finished casting frame to within 1-1/2 inches of finished pavement surface using commercial concrete.

After concrete has set a full 24-hours, paint the edges of the asphalt concrete pavement and the outer edge of the casting with hot asphalt cement. Place hot asphalt concrete to match finished pavement surface and compact with hand tampers and a patching roller. Asphalt concrete and cement concrete shall be considered incidental to the unit price of the structure being adjusted. Concrete blocks and/or bricks are among the items not allowed for adjustments.

Match the new patch with existing paved surface for texture, density, and uniformity of grade. Carefully paint the joint between the patch and the existing pavement shall then be carefully painted with hot asphalt cement or asphalt emulsion and immediately cover with dry paving sand before the asphalt cement solidifies.

Thoroughly mortar and plaster the inside throat of the structure.

7-05.5 Payment

Supplement the paragraph starting with “The unit Contract price per each for “Adjust Manhole”... with the following:

The unit Price contract per each “Adjust Manhole” all costs for work to remove existing manhole frame and cover and adjusting rings and replace manhole frame and cover and adjusting rings, as indicated on the Plans, including pavement sawcutting, removal and disposal, removal of frame, cover and rings, furnishing and installing replacement frame, cover and rings, backfill compaction and permanent asphalt restoration, including grout, sealants and other materials and work for a complete replacement and adjusted manhole frame and cover assembly.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.1 Description

Further supplement 7-08.1 as follows:

7-08.1(1) Submittals
(******)

Provide Type 2 Working Drawings for all materials and Standard Plans.

Provide Type 3E Working Drawings for dewatering plans, if any.

7-08.1(2) Piping within Structures and/or Above Grade
(******)

Work involving above grade piping and/or piping within wet wells and vaults is specified in Division 8.

7-08.2 Materials

Delete material items listed in 7-08.2 and substitute the following:

Provide materials meeting the following requirements:

Foundation Material Class A or B	9-03.17	Standard Specifications
Gravel Borrow	9-03.14(1)	Standard Specifications
Controlled Density Fill	2-09.3(1)E	Special Provisions
Crushed Surfacing Base Course	9-03.9(3)	Standard Specifications
Crushed Surfacing Top Course	9-03.9(3)	Standard Specifications

7-08.3 Construction Requirements

Supplement 7-08.3(1) by adding the following:

7-08.3(1)D Excavation Dewatering
(******)

This section specifies the definition, responsibilities and execution for dewatering associated with excavation for pipes, manholes, catch basins, cleanouts, side sewers, valve boxes, and wet wells, and other buried utility work. Implement excavation dewatering measures where necessary or directed by the Engineer. Implementation shall include, but not be limited to, the design, furnishing, installation, operation, maintenance, monitoring, reporting and removal of dewatering systems to achieve proper completion of Work performed under this Contract.

Provide an independent Professional Engineer to review dewatering plans and meet other requirements set forth in Section 2-09.3(1)G and subsections of this Project Manual.

Prevent the flow of surface water runoff into the excavation. Control surface water and other erosion control measures associated the Work in accordance with 8-01 of the Standard Specifications and modified in these Special Provisions.

Maintain groundwater level at or below the bottom of the excavation in all Work areas during excavation, foundation preparation, pipe and structure installation and backfilling. Excavation dewatering shall sufficiently control groundwater to prevent softening of the bottom of the excavations or formation of “quick” conditions or “boils” during excavation. Use gravel or non-moisture sensitive excavation backfill in areas encountering groundwater. If foundation soils are disturbed or oversaturated with water, then over excavate and replace the affected areas with suitable fill at no additional cost to the Owner. Upon completion of dewatering operations, restore the normal water table to its natural level in such a manner as to not disturb the pipe, its foundation and structures. Contractor shall be solely responsible to control the rate and effect of the dewatering in a manner to avoid all objectionable settlement and subsidence.

Direct discharge flow from excavation dewatering to a nearby sewer or storm drain system unless otherwise directed by the Engineer. Obtain, at no cost, a Discharge Authorization Permit from the City prior to discharging excavation dewatering flows into the City sewer or storm drain system. Control groundwater by excavation dewatering systems designed and operated to minimize turbidity of the discharged flow and to prevent removal of the natural soils or imported fill.

Soils data is available from the Soil Boring Logs in Appendix A or the Contractor may perform its own soils investigation. Contractor shall be responsible for cost of additional investigative work Contractor requires for designing the dewatering system. Plan and implement excavation dewatering systems using accepted and professional methods of design and engineering consistent with the best modern practice. Excavation dewatering systems shall be comprised of gravel-lined sumps, dewatering pumps, piping and conveyance components necessary for complete and reliable function.

Before dewatering operations begin, the Contractor shall have available on the Work site sufficient pumping equipment, or other machinery, or both, to assure maintaining continuous operation of the excavation dewatering system. Supply power service to dewatering pumps including, but not limited to, electrical, hydraulic, gas, or diesel, Maintain the dewatering system to allow for continuous operation without interruptions. If necessary, provide 24-hour supervision and follow-up by personnel skilled in the operation, maintenance, and replacement of dewatering system components. Damage to Work in place and the excavation, including damage to the excavation bottom, due to “boiling”, material removal, or discharge pumping from the excavated area, that may result from negligence, inadequate or improper installation, maintenance and operation of the dewatering system, or

mechanical or electrical failure of the dewatering system shall be Contractor's responsibility to repair at no cost to the City.

Excavation dewatering shall be included with the Work required for valve vault, wet well, storm drain, catch basins, utility services and related work, or other excavation activity performed as part of this Contract with no direct compensation made.

7-08.3(2) Laying Pipe

7-08.3(2)A Survey Line and Grade

Delete both paragraphs of 7-08.3(2)A and substitute the following:

Provide surveys required to construct the sewer line including, but not limited to, alignment stakes, offset stakes, grade hubs, and intermediate staking. Use main survey control points shown on the Plans, unless Engineer directs otherwise. If a Bid item for "Surveying" is not listed in the Proposal, then this item shall be included with the Work with no direct compensation made.

Provide laser control equipment approved by the Engineer for setting pipe grades.

7-08.3(2) Laying Pipe

Supplement 7-08.3(2) by adding the following:

7-08.3(3) Backfilling

Delete the first paragraph of 7-08.3(3) and substitute the following:

Perform trench backfilling only after inspection and approval of the installed pipe bedding zone backfill. Refer to the Plans for typical trench section backfill and compaction requirements.

If the Engineer determines native material is not suitable for use as trench backfill, use "Gravel Borrow" conforming to 9-03.14(1) of the Standard Specifications.

If there is an excess of suitable backfill material obtained from trench excavation at one location on the project, use it at other locations on the project or dispose of at an approved disposal site. The cost of transporting the excess backfill material is considered incidental to the Contract with no direct compensation made.

Use Controlled Density Fill in lieu of select trench backfill for fill above pipe zone at street crossings and as directed by the Engineer in other areas where in order to prevent pavement patch settlement requires high density backfill placement or effective backfill compaction is not possible.

Delete the first sentence of the third paragraph.

Delete the third and fourth sentences of the fourth paragraph.

7-08.4 Measurement

Add the following measurement description:

"Excavation Safety Systems (Shoring)," per lump sum, for all excavations for the work.

7-08.5 Payment

"Excavation Safety Systems (Shoring)," per lump sum.

7-15 SERVICE CONNECTIONS

(*****)

7-15.1 Description

Supplement this Section with the following:

This work shall consist of installing new service connections from the new main to the customer's service line with fittings required to make a watertight connection, installing new meter boxes, service lines, manifolds, saddles, setters, and other appurtenances, reinstalling existing water meters, extending the service line on the private side of the meter and connecting to the existing service line with an appropriate coupler to match existing material type.

7-15.2 Materials

Supplement this Section with the following:

All water service pipe, boxes, and appurtenances materials shall be as specified on the Plans and per the City of Kirkland Standard Plans and Policies.

END OF DIVISION 7

GSP DIVISION 8

City of Kirkland

DIVISION 8 – MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

(June 20, 2017 COK GSP)
8-01.1 Description

Section 8-01.1 is supplemented with the following:

Implementation of appropriate TESC BMP's at the appropriate construction phases is very important to prevent siltation of the subgrade, aggregate courses, and final permeable pavement. The Contractor shall install and maintain all temporary and permanent erosion control measures and Best Management Practices (BMPs) in accordance with the Contract Documents, Standard Specifications, Permit Conditions, the Contractors "Stormwater Pollution Prevention Plan" (SWPPP) and as directed by the Engineer prior to clearing, grubbing, or grading or as necessary, as clearing and grading progress. Such measures shall include, but are not necessarily limited to:

- Straw mulch, netting and tackifier
- Concrete wash
- Baker tanks and/or Settling ponds
- Inlet protection on existing and proposed drainage structures
- Reinforced silt fencing
- Plastic Covering
- Temporary pipe slope drains
- Temporary HMA Curb
- Disposal of sediments and materials
- TESC seeding
- Maintenance of BMPs including in the event of emergencies and as weather and field conditions dictate; and also including installation of additional BMPs which may become required as field and weather conditions evolve.
- Street sweeping and Cleaning
- ESC Lead per 8-01 of the Standard Specifications
- All materials, tools and equipment necessary to meet these requirements

The Contractor shall provide erosion control as required for all stockpiled materials at no cost to the Contracting Agency. The Engineer, in the event of an emergency, and as weather and field conditions dictate, may require additional erosion controls and BMPs.

Site Specific BMPs and SWPPP Plan

Temporary Erosion / Water Pollution Control notes and performance criteria are noted in the Contract Documents. The Contractor shall submit his or her own Storm Water Pollution Prevention Plan (SWPPP) to the Contracting Agency for review and approval prior to the commencement of clearing, grubbing, or grading activities.

Water quality testing and discharge volume reporting required by the project permits shall be performed by the Contractor and is a condition of approval of the SWPPP. The reporting data shall be provided to the Engineer as soon as practical, at regular intervals and prior to reporting deadlines established in the permits. The Contractor will provide a copy of the reporting information within 24 hours of a request to do so by the Engineer. All costs to

perform these reporting requirements are to be included in the lump sum contract price for “Erosion/Water Pollution Control”.

(June 20, 2017 COK GSP)
8-01.3 Construction Requirements

Section 8-01.3 is supplemented with the following:

The Contractor shall bear sole responsibility for damage to completed portions of the project and to property located off the project caused by erosion, siltation, runoff, or other related items during the construction of the project. The Contractor shall also bear sole responsibility for any pollution of rivers, streams, groundwater, or other water that may occur as a result of construction operations.

Any area not covered with established, stable vegetation where no further work is anticipated for a period of 15 days, shall be immediately stabilized with the approved erosion and sedimentation control methods (e.g., seeding and mulching, straw). Where seeding for temporary erosion control is required, fast germinating grasses shall be applied at an appropriate rate (e.g., perennial rye applied at approximately 80 pounds per acre).

At no time shall more than 1 foot of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned at a time designated by the Contracting Agency Construction Inspector.

The cleaning operation shall not flush sediment-laden water into the downstream system. The cleaning shall be conducted using an approved vacuum truck capable of jet rodding the lines. The collection and disposal of the sediment shall be the responsibility of the Contractor at no cost to the Contracting Agency.

(June 20, 2017 COK GSP)
8-01.3(1) General

8-01.3(1)A Submittals

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

Stormwater Pollution Prevention Plan

The Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with Department of Ecology requirements.

The Contractor shall incorporate the SWPPP implementation schedule into the Contractor’s progress schedule. The SWPPP and implementation schedule shall be submitted in accordance with Sections 1-05.3 and 1-08.3.

In addition, the SWPPP shall outline the procedures to be used to prevent high pH stormwater. The plan shall include how the pH of the water will be maintained between pH 6.5 and pH 8.5 prior to being discharged from the project or entering surface waters. Prior to beginning any concrete or grinding work, the Contractor shall submit the plan, for the Engineer’s review and approval.

The Ecology template can be found at the following link:

http://www.ecy.wa.gov/programs/wq/stormwater/construction/

The SWPPP is considered a "living" document that shall be revised to account for additional erosion control/pollution prevention BMPs as they become necessary and are implemented in the field during project construction. A copy of the most current SWPPP shall remain on-site at all times and an additional copy shall be forwarded to the Engineer. At the Contractor's preference, revisions to the SWPPP may be forwarded to the Engineer rather than submitting a complete document. Revisions to the SWPPP may be kept on-site in a file along with the original SWPPP document.

(June 20, 2017 COK GSP)
8-01.3(1)B Erosion and Sediment Control (ESC) Lead

Supplement this the second paragraph with the following:

3. Inspecting all on-site erosion and sediment control BMPs at least once every five working days and within 24 hours of every runoff event. A SWPPP Inspection report or form shall be prepared for each inspection and shall be included in the SWPPP file. A copy of each SWPPP Inspection report or form shall be submitted to the Engineer no later than the end of the next working day following the inspection. The report or form shall include, but not be limited to the following:

   a. When, where, and how BMPs were installed, maintained, modified, and removed.
   b. Observations of BMP effectiveness and proper placement.
   c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal SWPPP inadequacies.
   d. Approximate amount of precipitation since last inspection and when last inspection was performed.

4. Updating and maintaining a SWPPP file on site that includes, but is not limited to the following:

   a. SWPPP Inspection Reports or Forms.
   b. SWPPP narrative.
   c. Other applicable permits.

(June 20, 2017 COK GSP)
8-01.3(1)C Water Management

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

The Contractor will be responsible for meeting the SWPPP requirements.

The Bid Item "Erosion/Water Pollution Control" shall include the cost of providing temporary detention/retention facilities as illustrated in the Contractor's SWPPP Plan as well as modifications, additions and removals of such facility as dictated by the Contractor's sequence of work and may include, but are not limited to:

1. Temporary detention/retention facilities such as ponds, Baker Tanks, or other facilities.

2. If any permanent stormwater facilities are utilized, such as the detention vault, for SWPPP compliance, the Contractor shall remove accumulated sediment and clean the facility prior to final acceptance at no additional cost to the Contracting Agency.
3. Temporary facilities such as wheel wash stations or similar.
4. Temporary construction entrances.

No additional compensation shall be made for construction, alteration, removal, maintenance, and any additional requirements necessary for "Erosion/Water Pollution Control". No additional compensation shall be made for conflicts with existing or proposed improvements or construction sequencing of work when facilities are utilized to meet permit requirements.

(******)

8-01.5 Payment

Section 8-01.5 is deleted in its entirety and replaced with the following:

Payment will be made for the following bid item(s):

"Erosion/Water Pollution Control", by lump sum as provided in Section 1-09.6.

Installation, maintenance, and removal of erosion and water pollution control devices **(except inlet protection as provided in Section 5-04))**, including removal and disposal of sediment, stabilization, and rehabilitation of soil disturbed by these activities, and any additional work deemed necessary by the Engineer to control erosion and water pollution shall be included in the lump sum price bid under the item "Erosion/Water Pollution Control". Payment will be allocated as 75 percent for implementation of the SWPPP over the duration of the Contract and 25 percent for completing and providing the required inspection reports, per Bid Schedule. The portion for reports will be paid based on a pro-rated allocation over the working days of the executed Contract. The Engineer shall review the weekly and post-runoff event reports at each weekly meeting. If the required reports have not been prepared and provided to the satisfaction of the Engineer, the reports portion of the work for this item shall not be paid for that week and the overall payment shall be reduced by that amount. Such non-payment does not relieve the Contractor from the responsibilities for reporting.

(*****)

8-02 ROADSIDE RESTORATION

8-02.3 Construction Requirements

Section 8-02.3 is supplemented with the following:

Property Restoration

Property restoration shall consist of soil amending, tree, shrub, and groundcover planting, bark or woodchip mulch, and other work necessary to restore all disturbed areas to original condition or better. Property restoration shall include removal of the

existing lawn, soil preparation and amendment, furnishing and installation of all plantings per the plant schedule, fertilizer and wood bark mulch, per the plans.

8-02.4 Measurement

Section 8-02.4 is supplemented with the following:

The cost for furnishing and installing all landscape restoration materials as specified is included in the unit contract prices for “Property Restoration”.

No unit of measure shall apply to the lump sum price for property restoration.

8-02.5 Payment

Section 8-02.5 is supplemented with the following:

The unit Contract price for “Property Restoration”, lump sum, shall be full compensation for all labor, material, tools and equipment, supplies and incidental work to satisfactorily complete the work.

(*****)

8-04 CURBS, GUTTERS AND SPILLWAYS

8-04.1 Description

Revise the first paragraph in 8-04.1 to read as follows:

This work shall consist of construction of cement concrete curbs, curbs and gutters, gutters, and HMA asphalt Curbs in accordance with 8-04 of the Standard Specifications and as modified in these Special Provisions conforming to the Plans and Standard Drawings.

8-04.2 Materials

Supplement 8-04.2 by adding the following:

Liquid Membrane-Forming Concrete Curing Compounds	9-23.2	Special Provisions
Chemical Admixtures for Concrete	9-23.6	Special Provisions

8-04.3 Construction Requirements

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways

Supplement 8-04.3(1) by adding the following:

Provide steel forms on tangent sections and wooden forms for curved sections and radii.

Provide 1/2–inch premolded filler in lieu of 3/8-inch premolded filler for through-expansion Provide through expansion joint at maximum 30-foot intervals.

Provide through expansion joint at each end of driveway.

Compact the subbase for curb and gutter sections to 95-percent maximum density at optimum moisture content before placing the curb and gutter.

The top surface of the finished concrete shall not deviate more than 1/8-inch as measured using a 10-foot straight edge.

The curb alignment shall not vary more than 1/4-inch as measured using a 10-foot straight edge.

Construct cement concrete curbs where shown on the Plans, or as directed by the Engineer, in accordance with

Construct storm drainage frames and grates into cement concrete curb and gutter at locations shown on the Plans in accordance with.

After finishing, spray cement concrete curb, gutters and spillways using transparent curing compound in accordance with 5-05.3(13)A of the Standard Specifications.

(*****)

8-04.4 Measurement

Insert the following paragraph after the first paragraph:

Lengths of curb and gutter replaced due to disturbance necessary for completion of work.

(*****)

8-04.5 Payment

Revise the second paragraph to read:

"Remove and Replace Cement Conc. Traffic Curb and Gutter", per lineal foot.

(******)

8-05 VACANT

Delete Section 8-05 and substitute the following:

8-05 BYPASS PUMPING

8-05.1 Description

This Work shall consist of preparing and executing a sewer bypass to permit construction of improvements as called for on the Contract Plans. Contractor shall provide all labor, equipment, tools, and materials to perform the bypass in accordance with the requirements herein.

8-05.1(1) Maintaining Operation of the Sewer System

Owner will operate and maintain the existing wastewater conveyance system until the Contractor begins demolition of any existing wastewater gravity sewer, force main, effluent outfall pipe and/or pump station mechanical, electrical, or communication equipment and/or initiates any bypass pumping operations to facilitate conveyance system upgrade activities, whichever occurs first. The Owner will monitor the operation of the system throughout construction and will resume operation and maintenance of the system, or portions of the system, following the Contractor's startup and testing of the respective replacement gravity sewer, force mains, and/or pump station mechanical, electrical, and communication equipment and systems. The Contractor shall be responsible for continued operation of the system using existing, temporary and/or replacement mechanical, electrical and communication equipment at all other times. The Contractor's use of existing electrical and mechanical equipment shall be at his own risk and the Owner makes no representation of the suitability or reliability of existing equipment for Contractor's temporary use. Contractor shall maintain sewer service to developed properties within the project area, including those for which sewer system connections are to be modified.

The Contractor's sequence of work and bypass operations shall provide for continued wastewater flow from the existing tributary and connected sources until such time as permanent facilities are tested and fully operational. Portions of bypass operations may be removed prior to completion of all improvements,

provided the permanent facilities and remaining bypass operations provide for the continual flow of wastewater.

The Contractor shall specifically schedule, cause and control all work to be performed in the manner and at the time which will not disrupt, in any way, the continual flow of wastewater from the tributary system upstream, including customer connections to the Owner's downstream conveyance system outside the project area. The Contractor and all subcontractors shall anticipate that the requirement to continually provide wastewater flow may hinder or complicate the work. The Contractor and all subcontractors shall not be entitled to any extensions of time or to any claims for damages because of hindrances, delays, or complications caused by or resulting from maintaining operations or necessary maintenance of equipment.

The Contractor may modify site improvements and structures as required for construction, but make no modifications, excavations, or storage of materials that prevent continual operation of or access to the system elements in the project area. If elements of the facility or system are temporarily eliminated, disconnected or taken out of service for the convenience or necessity of construction, the Contractor shall provide an equivalent temporary facility, pipeline or piece of equipment capable of performing the same function without adversely affecting operation.

The Contractor shall accommodate use of and access to the premises by the Owner during the construction period. Access to residences and commercial operations shall be maintained at all times during construction.

The Contractor shall be solely and completely responsible for all claims and all damages resulting from failure to maintain permanent or temporary wastewater flow within the elements of the system during construction.

8-05.1(2) Bypass Pumping System Requirements

The Contractor shall be responsible for all sewer bypass and flow maintenance in the project area. The Contractor shall provide for the flow of wastewater, including inflow and infiltration, in the Owner's wastewater collection system from, through and around the project area as required to facilitate the work of the Project, and to prevent discharge of wastewater to the environment. The Contractor shall be responsible for all costs to clean up and otherwise remedy the impact or cost of wastewater releases to the environment as a result of the failure to maintain the required bypass operation.

The temporary bypass system shall consist of primary and standby pumps and motors, suction piping and temporary connections, discharge piping and/or hoses, discharge throttling plug valve(s) and check valve(s), temporary suction and discharge pipe restraint systems, level sensing equipment, automatic primary and standby control systems, and accessories. The system shall be tested using water by operating the bypass system for 24 hours prior to demolition work.

A primary and a standby pump shall be provided for each point of use of pumps in the bypass system. The standby pump shall be controlled automatically and

shall have a capacity equal to or greater than the capacity of the primary pump as specified below.

Portions of the temporary wastewater bypass system that are located above ground shall be protected from damage and shall be restrained in position. Vehicle ramps shall be installed at driveway crossings and where local traffic crossings are allowed by the Owner, County, City or State. Road crossings shall be accomplished by temporary shallow trench crossings per the requirements of the agency with road jurisdiction.

The primary temporary bypass pumps shall be capable of conveying peak flows as shown on the Contract Drawings. The fully automatic standby temporary bypass pumps shall be capable of conveying peak flows as shown on the Contract Drawings. The primary and standby systems shall each be capable of a minimum velocity of 3.5 feet per second if operated as part of a system of pumps, or with variable speed pumps, to provide adequate velocity in an existing or temporary force main.

The standby pump shall discharge to the same force main as the primary bypass system.

Each pump discharge in the bypass system shall include double check valves and a throttling valve to limit flow.

Automatic controls with level sensors shall cause operation of bypass pumps and limit surcharging of wastewater in upstream and downstream manholes. Separate automatic control systems and level sensors shall be provided for the primary and standby bypass systems.

If the pumps are powered by electricity from the local power utility, the standby pumps shall be powered by a diesel engine driven automatic assembly with a level sensor for automatic operation upon rising wastewater level (due to inadequate capacity of the operating pump or loss of electrical power).

Engine driven equipment, except that provided solely for standby operation, shall be equipped with “critical” rated silencers in sound-attenuating enclosures.

All engine-driven equipment shall be installed with fuel and oil containment berms.

Pumps shall be non-clogging, capable of handling domestic wastewater with 3-inch solids.

All bypass piping and components shall be flushed and disinfected prior to removal from the project site or relocation within the project area, unless pipe ends are capped to prevent the discharge of wastewater to the surrounding environment. Manholes, including any manholes surcharged during bypass operations, shall be pressure washed following the final removal of the bypass piping.

The Contractor shall furnish all materials, labor and equipment necessary to provide temporary status and alarm monitoring equipment for the bypass system. The bypass system shall include a high-level alarm sensor and output device for each suction location. The status and alarm outputs shall be temporarily connected so failure of either pump system (existing or temporary bypass) will be communicated to the Contractor and the Owner through the existing telemetry and dialer system, if available, or other temporary system to be provided by the Contractor. Upon receipt of an alarm during the bypass operation, the Contractor will be called out immediately by the Owner to address the situation and restore the bypass pumping operation. Contractor shall be available by cell phone 24 hours a day during the temporary bypass pumping operations.

8-05.1(3) Bypass Pumping Execution

The Contractor shall perform leakage and pressure tests of the bypass pumping discharge piping prior to actual operation. The Owner shall be given two working days' notice prior to testing.

The testing shall consist of twenty-four (24) hours of continuous successful operation, under continual observation by the contractor, of the bypass system(s). For testing, the suction piping and controls shall be established where they are to be used and the discharge shall be routed to the appropriate downstream structure. During the test, the primary system shall be disabled a minimum of six times to confirm automatic operation of the redundant system. Supplemental water shall be supplied for the testing, in order to observe six automatic cycles.

The system shall be successfully tested (i.e., no leaks, automatic operation, and maintenance of flow) prior to demolishing any existing power, control, telemetry, gravity sewer or pumping equipment.

The Contractor shall inspect the bypass pumping system every twelve hours while it is in operation to ensure proper system operation, adequate fuel supply, etc.

The Contractor shall ensure the temporary bypass system is properly maintained.

Bypass pipe traffic ramps used for access to, between or from a public road shall be marked in the field with traffic barricades equipped with flashing warning beacons operating 24 hours per day. Ramps shall be secured in place.

Bypass equipment shall remain in place, ready for continued operation, for a minimum of 24 hours following time of placement into service of existing or replacement facility, piping, or equipment.

(******)
8-05.2 Equipment

All pumps shall be fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in the priming system. All pumps shall prevent the introduction of air into the force main. The pumps may be electric or diesel powered. Pump system shall use sound attenuation or submersible pumps, such that sound pressure levels from pumping operations do not exceed state or local noise regulations/ordinances, whichever is more strict.

The Contractor shall provide the necessary stop/start controls for each pump and pressure sensing and speed override system.

The Contractor shall include one standby pump of each size to be maintained on site with automatic controls, ready for operation without need for operator action upon failure of the primary system. Standby pumps shall be on-line and isolated from the primary pump by a check valve.

All temporary discharge systems shall be constructed of pipe with positive, restrained joints. High density polyethylene (HDPE) pipe of a suitable size and pressure class for anticipated operating conditions shall be used to the maximum extent feasible. Fused joints shall be used to the maximum extent feasible. Under no circumstances will aluminum “irrigation” type piping or glued PVC pipe be allowed. Discharge hose will only be allowed in short sections as approved by the Owner. Hose fittings requiring clamps shall have redundant clamping systems.

Pumps, engines, controls, sensors, valves, piping, and other bypass system components shall be suitable for continual and intermittent automatic operation. Equipment shall be in good repair and maintenance records shall be available for review upon request by the Owner. Bypass system components shall be subject to inspection by Owner to evaluate suitability and confirm such components are in reasonably good condition prior to and during setup and leakage and pressure testing.

Equipment shall be supported by technicians trained in the operation, maintenance, troubleshooting, and repair of such equipment, with such technicians available for field service at any time and within two hours of notice.

Bypass pipe traffic ramps may be used where pipe extension around a traffic access is not feasible, and such ramps shall be used where indicated on the plans for pedestrian access. Where bypass pipe traffic ramps are used, each shall provide a minimum of twelve-feet of width for vehicle passage. Where indicated on the plans, supplemental ramps and/or modifications shall be incorporated for access for persons with disabilities, in accordance with the Americans with Disabilities Act (ADA).

(*****)

8-14 CEMENT CONCRETE SIDEWALKS

8-14.1 Description

Supplement this Section with the following:

Removal of the existing concrete sidewalk is included in the unit price for the removal and replacement of the concrete sidewalk. The cost for removal and disposal of existing concrete sidewalk not scheduled to be replaced shall be incidental to other bid items.

(*****)

8-14.5 Payment

Revise the first paragraph to include:

"Remove and Replace Cement Conc. Sidewalk", per square yard.

(*****)

8-14.3 **Construction Requirements**

8-14.3(4) Measurement

Section 8-14.3(4) is replaced with the following:

Cement concrete sidewalks will be measured by the square yard of finished surface and will include the surface area of the sidewalk ramps. Included in the unit contract price shall be all labor, tools, equipment, materials, and incidental items of work including, but not limited to, providing expansion joints, joint filler, finishing the surface, thickened edges in curb returns, raised edge for back of walk, materials and labor for ADA sidewalk ramps and providing white polyethylene sheeting for curing.

The unit contract price listed above shall be full compensation for all labor, tools, materials, and equipment necessary to complete the work as specified herein.

Ramp detectible warning retrofit will be measured by the square foot of truncated dome material installed on the existing ramp.

*(JUNE **12, 20**19 **COK GSP)***

8-19 (Vacant)

Delete Section 8-19 and replace with the following:

The Contractor shall provide a field office on or adjacent to the Project Site for the use of the Engineer's staff within five (5) Working Days from the Notice to Proceed Date. The field office, its location, and an alternate date if necessary, shall be subject to the approval of the Engineer and shall be established at the pre-construction meeting. The field office shall meet the following requirements:

1. The field office shall be a weather-tight building; either portable or permanent structure a minimum of eight (8) feet wide with not less than 360 square feet of clear floor space, having at least one door, and a window area of not less than 40 square feet. Windows shall open to allow ventilation. Doors and windows shall be provided with bug screens. The interior walls shall be covered with material suitable for displaying Contract Plans and progress charts, etc.
2. To deter break-in and theft, window and door glass shall be protected with heavy security screens on metal frames bolted to the walls and doors. All doors shall have 2 locks each: one doorknob keyhole lock and 1 deadbolt cylinder lock, each with its own distinct key. The Contractor shall provide 6 sets of keys for each lock.
3. The field office shall be level and, if portable, the structure shall be supported on blocks. If more than three (3) steps are required to enter the office, a floor-level landing of at least 12 square feet with railing shall be provided. Steps and landing shall be stable and slip resistant. A 3 sided boot brush shall be provided at each field office entrance.
4. The Contractor shall be responsible for maintaining and cleaning the field office; repairing any damage to the structure, equipment and appurtenances; providing weekly janitorial services including supplying appropriate toilet room paper products; refilling applicable dispensers with drinking water cups, waterless hand cleaner with pumice, and paper towels; cleaning windows and sweeping floors; and emptying trash receptacles and recyclables, disposing trash, and relining trash receptacles and recyclables.
5. The office shall be furnished with the following furniture, equipment and appurtenances reasonably presentable, in good working order, and acceptable to the Engineer:
    a. Drafting table, 6 foot x 4 foot minimum, a “D size” plan drawer, soft pad covering entire top, locking tilt feature, and stool with back support (one set);
    b. Office desk, 30” x 60” minimum size, with at least 4 drawers which can be locked with key & one of which is set up for file folders, 2 sets of keys each desk (two);
    c. Office table 36” x 72” (two), 1 Conference table 4’ x 10’;
    d. Office chairs with seat & back cushion (eight);
    e. Four (4) drawer legal file steel cabinet (one) w/100 legal size folders and hanging folders, locking feature with 2 sets keys, and frame in each drawer to hold folders;
    f. Trash receptacles and recycle bins for paper, plastics and glass.
    g. Color Photocopy/Color Printer/Color Scanner/Fax multifunction machine with multiple tray frontload including 3 paper trays (8-1/2 x 11-inch, 8-1/2 x 14-inch, and 11 x 17 inch) with the following:
        - Understorage cabinet, floor wheels to accommodate service technician.

- Preset reduction to 50% and enlarge to 200% plus zoom in 1% increments.
- Bypass tray
- Replacement toner cartridge (1 cartridge for each color)
- Capability to scan directly to PDF color at 300 dpi
- Plain paper fax capable
- Direct phone line connection and programmable capable to directly send scanned documents and faxes by e-mail.
- 400 sheets of each size 20 lb. bright paper with no more than 30% recycle post-consumer content.
- Repair and maintenance service contract with 4 hour service response on-site parts and labor;

h. The Contractor shall provide a commercial grade broadband internet access with a static IP address (Cable or DSL at a minimum speed of 2.0 Mbps upload & 6.0 Mbps download) between the field office and an Internet Service Provider (ISP). The Contractor shall provide for 24 hour technical support and a local or 1-800 phone number to troubleshoot and maintain the broadband connectivity. The Contractor shall provide inside wiring to support a Local Area Network inside the field office and shall include a 4-plex jack to at least
5 workstations (desk or table locations to be addressed at the pre-construction meeting per Section 1-08.1(2)). The Contractor shall provide necessary equipment to allow internet connectivity and shall be configured to allow VPN access from individual machines to the City of Kirkland. Color Printer/Color Copier/Scanner/Fax multifunction machine shall be connected to the office network and programmed to send scanned documents by e-mail. The Contractor shall contact City of Kirkland IT Department at least 5 Working Days in advance for access to the City of Kirkland internal network;

i. White board (3'H x4'W) with eight (8) dry erase markers and 1 white board eraser.

6. Electric power of sufficient capacity to operate an electric heater, air conditioner, FAX machine, internet access, 5 computers with monitors, calculator, and lights. Field office shall be provided with a minimum of eight (8) duplex convenience electrical outlets. The office shall be illuminated at the tables and desks. An outdoor light fixture with a 150 watt bulb or approved equal shall be installed to effectively light the area around the office facility.

   After obtaining inspection and approval of the field office electrical system and the proposed temporary power connection hook-up from City, the Contractor shall provide a minimum 15 Working Days advance notice to the local power utility requesting a temporary power drop and connection. Generators (gas and diesel) for producing electrical power will not be allowed unless the Engineer permits such in writing.

7. Contractor shall provide drinking water with disposable cup dispenser filled with cups;
8. The Contractor shall provide heating and air-conditioning of sufficient capacity to heat the office to 70°F within 1 hour, and to cool the office 15°F within 1 hour.

If the Contractor fails to provide a field office at the location on the date agreed to at the pre- construction meeting, the Engineer will provide Written Notice of such and shall have the right to withhold progress payments in accordance with Section 1-09.9(3). If within 5 Working Days of the Engineer sending this Written Notice the Contractor has not provided the field office, then the Engineer will have the option to provide the field office. If the Engineer elects to provide the field office, the Engineer will give the Contractor a second Written Notice of such; will within three (3) Working Days of giving the second Written Notice provide the field office meeting the requirements specified in Section 1-07.29; and will charge the Contractor by deducting from monies due or to become due the Contractor on progress payments, all costs associated with the field office as specified in Section 1-07.29. Upon deliverance of the second Written Notice, the Contractor's right to provide the field office shall be forfeited.

The field office, equipment, and appurtenances supplied by the Contractor shall revert to and be removed by the Contractor when the Engineer, via the Written Notice of Physical Completion to the Contractor, establishes the Physical Completion Date. If the Contractor removes, closes, or discontinues the services specified in Section 1-07.29 prior to receiving the Written Notice of Physical Completion without first obtaining approval from the Engineer, the Contractor will be charged Liquidated Damages in accordance with Section 1-08.9.

All costs for the work required to provide and maintain the field office including regular expenses for telephone, internet, electricity, etc.; incidental constructions to accommodate; and to procure all permits and licenses required for the field office to meet the requirements of Section 1-07.29, shall be included in the lump sum Contract Price Bid for "Mobilization." All costs for the work required to relocate the field office, if required, shall be considered incidental to the Bid item "Mobilization

(*****)

8-26 VACANT

Delete Section 8-26 and substitute the following.

8-26 WASTEWATER LIFT STATION

8-26.1 Description

Contractor to furnish all labor, materials and equipment to complete upgrades to the existing wastewater lift station, as indicated herein and on the Contract Plans, tested, and ready for operation. Exterior piping to be installed per Division 7 of this manual. Piping interior to structures shall be installed as specified herein and as shown on the Contract Plans. Install structures on level, firm, and undisturbed subgrade with gravel base as shown on the plans and specified herein. Install vault and accessories in conformance with drawings, specifications and recommendations of vault manufacturer unless otherwise instructed in writing by the Engineer. The vault joints, pipelines, and conduit

penetrations through walls as shown on the plans shall be sealed watertight. No leakage will be allowed into the structures.

8-26.1(1) Wet Well

This Work consists of partial removal and reconstruction of an existing concrete wet well in accordance with the Plans. The replacement work consists of precast concrete risers in sections and a replacement top slab integrally cast hatch with safety grating. Reconstruction shall include replacement of the top slab to provide a uniform diameter to grade, wet well pipe penetrations, revise fillets, control and electrical improvements, aluminum hatch, and pump and piping equipment per Section 8-26.1(2) below, guide rails and supports, and electrical power and signal wiring and appurtenances and other material and equipment as indicated in the Plans. The work includes surface preparation and furnishing and placement of concrete and pipe coatings per the finish schedule.

8-26.1(2) Pumps

This Work consists of furnishing, installing, and testing two pumps within the above referenced wet well in accordance with the Plans and these Specifications. Pumps shall be as specified in Section 9-37. A spare pump assembly, not including discharge elbow, identical to the installed pumps, shall be provided to the City.

Appurtenances include discharge elbows, cables, guide rails, pump control accessory units, and spare pump to be delivered to City designated location.

Install pumps, guide rails, discharge elbows, and appurtenances in accordance with manufacturer's written instructions. A representative from the pump manufacturer shall be on-site to complete start-up and testing in coordination with Contractor.

8-26.1(3) Valve Vault

This Work consists of furnishing, installing, and equipping a precast concrete valve vault as specified in Section 9-37.9, and in accordance with the Plans. Vault to include precast sections with integrally cast hatch with safety grating in accordance with Section 9-37.6, ladder, pipe penetrations and seals, drain piping, valves and piping and electrical power wiring and appurtenances and other material and equipment as indicated in the Plans.

Waterproofing shall be furnished and applied per Section 9-37.8. Prepare surfaces for waterproofing and apply material per manufacturer's written instructions. Application to the top of roof slabs shall have an initial coat followed by Xypex Modified if using Xypex as a manufacturer. Damp-proofing is not acceptable.

The work includes surface preparation and furnishing and placement of pipe coatings per the finish schedule.

Water used shall be free of injurious amounts of oil, acid, salt, alkali, organic matter, or other deleterious substances.

This work also includes removal of existing dry well mechanical components and concrete access riser, sealing pipe penetrations, filling the vault with crushed surfacing top course and CDF and capping, prior to placing foundation to support precast valve vault specified above to be placed above, and related work as indicated on the Plans.

8-26.1(4) Power and Controls

This work consists of furnishing, installing, and testing of electrical power and control equipment for the lift station and valve vault including a new electrical service, electrical power and control panels, instrumentation, appurtenances, and other work as shown on the plans. Work also consists of the construction and testing of the electrical equipment, as well as coordination with Puget Sound Energy for a service transformer and electrical service, and all other power and control systems and connections.

8-26.1(5) Davit Crane Base

This work consists of furnishing and installing two flush mount concrete davit crane bases and sockets for the Owner's davit crane. Reuse of the existing base or socket is not acceptable. Furnish and install mechanical test plugs in each socket.

Install socket and cover per manufacturers' written instructions and as shown on the Plans.

8-26.1(6) Startup and Testing

Work consists of startup and testing, including a wet well draw down test, force main pressure test, and electrical power, control and instrumentation tests. Contractor shall provide a manufacturer's representative for pump startup and testing, as well as coordinate with the Owner's representatives for witnessing drawdown tests and other startup and testing.

Pumps shall be checked visually for leakage under pressure, and electrical components are correct for the electrical power and controls as shown on the Plans. Discharge piping shall be connected and a draw down test shall be conducted to measure the performance (flow and discharge head) of each pump. Also, amp readings and other electrical tests may be performed concurrently. Contractor shall furnish all labor, materials, tools, and equipment required for testing and shall prepare a written record of all testing. Provide one copy of the records to Owner for review and inclusion in the station operation and maintenance manual(s).

Force main from pump's discharge riser through the wet well and valve vault and to the point of work before the connection to the existing main shall be pressure tested in accordance with Section 7-09.3(23) of this manual. Provide test reports to Owner. After testing force main may be connected to the existing force main.

8-26.1(7) Service Water System

Work consists of the installation of a water service per Division 7, and cross connection control device with associated piping, fittings, heated enclosure,

and appurtenances as shown on the Contract Plans and as indicated in the COK Standard Plans.

Reduced pressure backflow assembly (RPBA) and heated enclosure are as specified in Division 9, Sections 9-38.4 and 9-41 respectively.

Enclosure to be mounted on a concrete pad as indicated on the Plans.

Install RPBA per manufacturer's written instructions and in accordance with City Cross Connection Control Plan. Drainage system shall be sufficient to convey the full flow rate from a failed device via gravity. Drain to daylight or as shown in the plans. Test RPBA per WAC 246-290-490 using a certified BAT tester and provide City and Engineer with testing report. Utilize City "Backflow Prevention Assembly Testing Report" form found on the City website.

Install enclosure per manufacturer's written instructions using stainless steel hardware and as shown on the Contract Plans.

8-26.2 Materials

Ductile Iron Pipe	9-05.13	Special Provisions
Foundation Material	9-03.17	Standard Specifications
Crushed Surfacing Base Course	9-03.9(3)	Standard Specifications
Crushed Surfacing Top Course	9-03.9(3)	Standard Specifications
Mortar, non-shrink	9-20.3(2)	Standard Specifications
Commercial Concrete	6-02.3(2)B	Standard Specifications
Watertight Connection Boots	9-04.13	Special Provisions
Coatings	9-37	Special Provisions
Precast Concrete Vault	9-37	Special Provisions
Cementitious Waterproofing	9-37	Special Provisions
Access Doors	9-37	Special Provisions
Pumps	9-37	Special Provisions
Valves	9-37	Special Provisions
Gauges	9-37	Special Provisions
Backflow Assembly	9-37	Special Provisions
Electrical Equipment	9-38	Special Provisions
PVC Piping	9.15.1(2)	Standard Specifications
Bronze Nipples and Fittings	9.30.6(6)	Standard Specifications

8-26.2(1) Submittals

Submit catalog data showing material information and conformance with Division 9 of these provisions. The intended use of each item shall be indicated.

8-26.2(2) Manufacturers Requirements

1. Precast concrete manufacturer shall supply wet well components from a NPCA certified facility.
2. Electrical components, devices, and accessories shall be as specified in Section 8-27 and Division 9 in addition to manufacturer requirements.
3. Pump manufacturers shall have a minimum of 10 years of experience in wastewater pumping of raw domestic sewage with a demonstrated ability to

convey “flushable wipes” without clogging or undue maintenance. A minimum of five (5) references shall be provided upon request.

8-26.2(3) Operation and Maintenance Data

The Contractor shall collect and collate detailed operation and maintenance manuals for the pumps, valves, davit hoist sockets and electrical equipment, as further specified in Section 8-27 and provide two print versions and an electronic version (PDF file) to the Owner. The manuals shall include, but not be limited to the following, as applicable for each item:

- Preventative maintenance procedures
- Trouble-shooting
- Calibration
- Testing
- Replacement of components
- Automatic mode operation
- Manual mode operation
- System schematics
- As-built wiring diagrams
- Catalog data/parts list for all equipment and control devices
- Listing of recommended spare parts
- Listing of recommended maintenance tools and equipment

8-26.3 Construction Requirements

8-26.3(1) Shoring, Materials and Traffic Maintenance

Contractor to maintain shoring and shall not stockpile soil and other construction materials on roadways or in areas that may compromise site safety including but not limited to blocking traffic or interfering with traffic sightlines without implementing traffic control measures specified herein.

8-26.3(2) Installation

Install wet well, valve vault, piping, equipment and appurtenances in accordance with the Contract Plans and manufacturer’s written instructions and as described in this Section. Provide Engineer and Owner a copy of all pump and piping test reports.

The bottom of the excavation for the vault shall be fine graded to a plane surface on firm subgrade material. Bedding material shall be uniformly spread and compacted to a depth no less than 12 inches over the bottom of the excavated area to provide uniform bearing for the structure.

Install structure and accessories in conformance with Plans, specifications and recommendations of vault manufacturer unless otherwise instructed in writing by the Engineer.

The structure joints, pipeline, and conduit penetrations through walls as shown on the plans shall be sealed watertight with exterior waterproofing, supplemental joint seals and pipe and conduit penetration seals as indicated on the Contract Plans. No leakage will be allowed into the vault.

8-26.4 Measurement

The unit Contract price per lump sum for All Other Work shall be full compensation for all labor, equipment, material, tools, and incidentals necessary to provide a fully functioning upgrade duplex wastewater lift station, including structures and structure modifications, site improvements and restoration, piping, valves and fittings, concrete and asphalt pavement surfacing, mechanical appurtenances, water supply, service and appurtenances, electrical power and control panels and enclosure, and all other appurtenances, piping and equipment or work not included in other bid items listed on the Proposal Form. The lump sum bid price shall include, but not be limited to, the following:

- Demolition, removal and disposal of existing lift station mechanical and electrical equipment and structures including concrete pad, wet well grating and ladder/rungs, dry well and wet well risers, ladders and appurtenances, access covers, blower, air vent, davit socket and base, water service, storm drain pipe, tree removal and stump grinding, landscaping removal and clearing and grubbing of work area. Grout, plug and seal all penetrations where materials removed in wet well and dry well.
- Furnish, install, operate, maintain and decommission a wastewater bypass system.
- Pothole and locate existing force main at station discharge. Drain force main in preparation for use for bypass operation and final reconnection.
- Coordination with PSE and provision of replacement electrical power service per Section 8-27.
- Acquisition of electrical permit(s) and payment of fees.
- Completion of new water service to station.
- Excavation and backfill for structures and service lines including compaction.
- Furnish and install wet well riser and top slab including integrally cast access hatch with safety grating, frame drain, joint seals, penetration seals, cementitious waterproofing, concrete fillets, and appurtenances.
- Furnish and install valve vault integrally cast access hatch with safety grating, ladder with safety post, frame drain, joint seals, penetration seals, cementitious waterproofing, grout floor, vault drain and piping, and appurtenances.
- Furnish and install two wastewater pumps including discharge elbows, guide rails and brackets, lifting chains, power and signal cables, and appurtenances.
- Furnish two spare wastewater pumps including fittings for use on guide rails, with lifting chains, power and signal cables and appurtenances necessary for use as spare equipment.
- Furnish and install piping, valves, fittings, supports in wet well, valve vault and to connection with existing force main and related work and materials.
- Place and compact crushed surfacing top course and CDF (material paid per separate bid items) in existing dry well to remain, and seal with concrete plug.
- Furnish and install davit anchor sleeves, caps and foundations.

- Furnish and install water service and backflow assembly including concrete pad, enclosure, pipe and fittings, backflow assembly and testing.
- Furnish and install flushing port assembly.
- Complete surface preparation and furnish and place wet well interior coating and pipe and fittings coatings per finish schedule.
- Furnish and install concrete pad including forms, reinforcement and expansion joints.
- Furnish, install, test and startup all electrical power supply and distribution equipment, pump control panel, instrumentation, conduit, conductors, supports, hardware, stilling well, electrical equipment enclosures and all appurtenances.
- Completion, including provision of all materials and equipment necessary, of testing all piping and equipment, including pump, power and control systems.
- Street cleaning and sweeping with no allowance for time to relocate equipment out of the area to be cleaned. No separate payment will be made for water required for dust control and the normal operation of the pickup sweepers.
- Pressure testing of all mains and shall include providing temporary connections, plugs, valves, fittings, and other such appurtenances to test the piping in accordance with these specifications.

8-26.5 Payment

Payment will be made for the following bid item:

All Other Work, per lump sum.

(*****)

8-27 VACANT

Delete Section 8-27 and substitute the following:

8-27 LIFT STATION ELECTRICAL

8-27.1 Description

Work consists of the demolition of the entire existing electrical and control system at the existing Trend Lift Station and the installation of a complete new electrical and control system for an upgraded Trend Lift Station.

The contractor shall coordinate with the City of Kirkland and Puget Sound Energy for the disconnection of the existing electrical service and removal of existing electrical equipment as indicated on the drawings. The contractor shall also coordinate with Puget Sound Energy for the installation of a new electrical service.

The contractor shall coordinate with the City of Kirkland and the telephone service company to disconnect and remove all existing telephone line connections as indicated on the drawings.

The Contractor shall ensure that sewage pumping continues during construction either by preserving existing pumping operations until new is completed or providing temporary power for pump around scenarios or other workable alternatives. The status and alarm monitoring systems shall remain operational or be temporarily rearranged to provide

continuous monitoring. The Contractor shall ensure that sewage pumping continues during construction either by preserving existing pumping operations until new is completed or providing temporary power for pump around scenarios or other workable alternatives.

The services of a Systems Integrator shall be retained by the Contractor to supply the Pump Control Panel and the Control Panel. The Systems Integrator shall have the authority to affix a UL Certification to the Panels.

The Contractor shall provide all labor, material, tools, equipment, and services required to complete the furnishing, installation, wiring, connection, calibration, adjustment, testing and operation of all electrical equipment, devices and components as indicated and implied by the plans and these specifications.

Complete the wiring, connection, adjustment, calibration, testing and operation of mechanical equipment having electric motors and/or built-in or furnished electrical components. Install electrical components that are furnished with mechanical equipment.

Provide the size, type and rating of motor control devices, equipment and wiring necessary to match the ratings of motors furnished with mechanical equipment.

Provide electrical equipment that fits in the areas shown on the drawings. All equipment shall be readily accessible for maintenance, shall have electrical clearances in accordance with NEC.

Complete the procurement, installation, wiring, connection, calibration, adjustment, testing and operation of all electrical devices, components, accessories, and equipment which are not shown or specified but which is nonetheless required to make the systems shown and specified properly function.

Test electrical equipment prior to installation so that defective equipment is not installed.

Provide start-up, follow-up, and training of the Owner's personnel for electrical systems.

Make all corrective measures required during start-up.

Provide field services of qualified technicians to supervise and check out the installation of the equipment, to supervise and check out interconnecting wiring, to conduct start-up of operation of the equipment, and to correct any problems that occur during start-up.

Nameplates shall be provided on all electrical and control equipment, Control Panels, control stations, and all electrical control equipment enclosures. Nameplates shall be made of 1/16-inch thick machine engraved laminated phenolic having white letters not less than 3/16 inches high on black background. All nameplates shall include the equipment name or number. All selector switches shall be provided with nameplates with text as noted on the control wiring diagrams shown on the drawings.

8-27.1(1) Standards and Codes

Permits, licenses, approvals, and other arrangements for work shall be obtained and paid for by the Contractor and included in the bid price.

Electrical work shall be executed in strict accordance with the latest edition of the National Electrical Code and all local ordinances and regulations.

All electrical equipment, materials, construction methods, tests and definitions shall be in strict conformity with the established standards of the following in their latest adopted revision:

- Underwriters' Laboratories, Inc. (UL)
- National Electrical Manufacturers Association (NEMA)
- Canadian Standards Association (CSA)
- Electrical Testing Laboratories (ETL)
- Factory Mutual (F.M.)

All materials and equipment specified herein shall be approved by the Underwriter's Laboratories or other Washington State approved testing agencies, for the purpose for which they are used and shall bear the testing agencies' label.

All materials shall be new, free from defects, of current manufacture and of quality specified or shown. Each type of material shall be of the same manufacture throughout the work.

8-27.1(2) Contract Documents

The electrical layouts are generally diagrammatic. The location of equipment is approximate unless dimensioned. Exact locations and routing of conduits shall be governed by structural conditions and physical interferences and by locations of electrical terminations on equipment. Minor adjustments and deviations from the apparent locations shown on the drawings shall be provided without extra costs.

8-27.1(3) Reference Documents

The Contractor shall refer to the drawings, project data and shop drawings of other trades for additional details that affect the proper installation of the work. Diagrams and symbols showing electrical connections are diagrammatic only, and so do not necessarily show the exact physical arrangement of the equipment.

8-27.1(4) Site Familiarization

The Contractor shall refer to the drawings, project data and shop drawings of other trades for additional details that affect the proper installation of the work. Diagrams and symbols showing electrical connections are diagrammatic only, and so do not necessarily show the exact physical arrangement of the equipment.

8-27.1(5) Project Record Drawings

A set of drawings shall be maintained at the job site showing any deviations in the electrical systems from the original design. Minor changes in branch circuit wiring may be omitted. A set of electrical drawings, marked in red to indicate the routing of concealed conduit runs and any deviations from the original design, shall be submitted to the Engineer for review at the completion of the project prior to final acceptance.

8-27.1(6) Guarantee

The Contractor shall guarantee his work and all components thereof, excluding incandescent, LED and fluorescent lamps, for a period of one year from date of acceptance of the installation. He shall remedy any defects in workmanship and repair or replace any faulty equipment that shall appear within the guarantee period without additional cost to the Owner.

8-27.1(7) Cleanup

The premises must be kept free of accumulated materials, rubbish and debris at all times. Surplus material, tools and equipment must not be stored at the job site. At the completion of the job, all equipment and fixtures shall be left clean and in proper condition for their intended use.

Lamps and fluorescent tubes shall be cleaned and defective units replaced at the time of final acceptance.

8-27.1(8) Demolition

The Contractor shall include in his bid all costs for removal of existing electrical equipment. The contractor shall double check with the Owner to see if they desire any of these items. Those requested by the Owner shall be delivered as directed by the Owner. Any items not requested by the Owner shall be disposed of by the contractor. All additional charges, including landfill charges for all equipment and devices shown to be removed on the electrical drawings shall be included in the bid price. The areas where equipment has been removed shall be cleaned and restored and repainted as required to leave a clean and usable space.

8-27.1(9) Test Reports

Testing for installed conductors and ground electrodes is required as specified in appropriate sections. Test reports shall be submitted to the Engineer prior to final acceptance.

8-27.1(10) Temporary Light and Power

The Contractor shall provide adequate services for temporary light and power. The Contractor shall verify the need in terms of capacity and characteristics (rating, single or three-phase) as required for the construction and include the cost of furnishing both the installation and the power usage in the bid. Temporary services shall be provided until the Owner accepts the project or the permanent services are provided.

8-27.1(11) Facility Operation Responsibilities

Sewage pumping must be continued throughout the construction period. Off-site alarm and status annunciation using telemetry equipment shall remain operational at all times during construction. The Contractor shall be responsible for planning, coordination, scheduling, and the provision of temporary equipment and materials as required to provide continuous sewage pumping operation while accomplishing the new construction as

shown on the contract drawings. Existing telemetry and alarm equipment may be relocated, reconnected, and temporarily reused for off-site alarm and status monitoring during construction. Power and communication outages are to be avoided where at all possible. Minimum power and communications outages required for disconnection and reconnection of cables will be allowed but must be coordinated with the Owner.

8-27.2 Raceways

8-27.2(1) Description of Work

This section covers the furnishing and installation of all raceways, fittings and boxes used in the construction of these facilities. All wiring shall be in a raceway system.

Ground Conductor: All power distribution raceways shall contain a minimum of one continuous copper equipment grounding conductor sized in accordance with the N.E.C.

8-27.2(2) Standards and Codes

All materials and equipment specified herein shall be approved by the Underwriter's Laboratories or other Washington State approved testing agencies, for the purpose for which they are used and shall bear the testing agencies' label.

All materials and equipment specified herein shall conform to all applicable NEMA, ANSI and IEEE standards.

All materials and equipment specified herein, and their installation methods shall conform to the latest enforced version of the National Electric Code (N.E.C.), Underwriters Laboratories and all other required codes and ordinances.

8-27.2.(3) Submittals

Submit catalog data showing material information and conformance with Division 9 of these provisions. The intended use of each item shall be indicated.

8-27.2(4) Area Classifications

The following classification of areas shall be used as a reference in determining application of material covered by this Section:

- Hazardous areas, Class I, Division 1: Wetwell and areas 3 feet from the wetwell access hatch to a height of 18 inches, and 3 feet from wetwell vents.
- Hazardous areas, Class I, Division 2: 5 feet from wetwell vents.
- Corrosive Areas: Outdoor areas above and below grade.
- General Purpose Areas: All other areas not described above.

8-27.2(5) Raceway Installation

8-27.2(5)A Conduit

Exposed conduit shall be installed with runs parallel or perpendicular to walls, structural members or intersections of vertical planes and ceiling. No conduit shall approach closer

than 6 inches to any object operating above the rated temperature of the insulation of the wiring in the conduit. Frequency of conduit supports shall be per N.E.C.

Conduit supported directly from the building structure shall be spaced out at least 1-5/8 inch using framing channel. Framing channel shall meet the requirements of Section 9-42.1(7) of these provisions.

Where three or more conduits are suspended from ceiling or overhang, they shall be supported by racks of threaded rod and framing channel.

Welding, brazing or otherwise heating of the conduit is not allowed. Plumber's perforated strap hanger iron shall not be used for any purpose.

Where required for ease of pulling and as necessary to meet codes, install junction, pull boxes or handholes even though not shown on the drawings.

Conduit shall terminate in junction boxes, outlet boxes or panels with proper fittings. Conduit entering free-standing panels shall terminate in clear wiring space. Where such conduits are located on drawings with dimensions or elevations, adjust as necessary for conduits to enter clear wiring space and shall be terminated with a grounding bushing.

All conduit entering sheet-steel NEMA 1 boxes or cabinets shall be secured by locknuts on both the interior and exterior and an insulating bushing installed over the conduit end. All conduit entering NEMA 12 or JIC boxes shall be terminated with a raintight hub. All surface-mounted cast boxes shall have threaded hubs. All joints shall be made with standard couplings or specified unions. Running threads shall not be used in lieu of conduit nipples, nor shall excessive threads be used on any conduit. Conduit terminated in NEMA 4 shall be terminated with raintight hubs. Conduits terminated in cast boxes shall have five full threads of contact. The ends of all conduit shall be cut square, reamed and threaded with straight threads. Conduit joints shall be made up with T&B Kopr-Shield which shall be applied to the male threads only.

Exposed threads or metal surfaces of RMC conduit routed in corrosive areas are to be coated in the field following installation with either bich-mastic or brush applied Rob Roy coating. Spray-on coating is not allowed.

Conduit installed in concrete slabs or walls shall be placed in the middle third where possible. Slabs laid on the earth shall be thickened by trenching, if the conduit cannot be placed within the slab thickness shown. Conduits under floating slabs shall be separately encased from the slab and care shall be taken to avoid tying non-floating beams to the floating slab through the encasement. Conduits rising through floating slabs shall be brought through sleeves in the slab which shall be sealed with non-hardening mastic after installation. Where the conduit is subject to movement (embedded in a floating slab), any extension to fixed walls or equipment shall be made through a suitable expansion fitting or flexible jacketed conduit.

Clearances equal to the conduit trade diameter but not less than 1- 1/2 inches shall be maintained between conduits encased in slabs. Clearances of less than 1 1/2 inches at conduit crossings and terminating locations may be allowed by the Engineer at his discretion. No conduit shall be installed in beams or footings.

Flexible conduit shall not be used as a general purpose raceway but shall be provided in locations requiring flexibility. Flexible conduit shall be used for all motor connections. Where flexibility is required for electrical raceways on equipment, flexible conduit shall be used in accordance with JIC standards, these specifications, and the local inspection agency. The maximum length of flexible conduit shall be 72 inches.

Spare conduits shall contain one 3/16-inch diameter nylon pull rope.

Exercise necessary precautions to prevent the lodging of dirt, concrete or trash in the conduit, fittings, and boxes during the course of installation.

After the conduit has been installed, the conduit shall be tested for obstructions or flattening by pulling a mandrel of appropriate size through the conduit. If an obstruction is found that section is to be replaced. Cleaning conduits shall be performed by drawing a brush with stiff bristles and a swab through each duct and conduit to make certain no foreign materials are left in the conduit. Cleaning and mandrelling operations may be performed simultaneously.

Where conduit enters the facility below grade, the conduit shall be sealed with duct seal.

When rigid steel and PVC coated rigid steel conduit is threaded in the field, the threads shall be re-galvanized by the Galv-a-weld process or by Gal-van-ize as manufactured by Lawson Products, Inc.

8-27.2(5)B Outlet Boxes

Outlet boxes shall be located to provide ample clearance between fixtures, pipes, beams, and ducts. The location of all outlets shown are approximate. The exact location shall be verified on the job to avoid conflict with other work. Boxes shall be accurately placed and independently and securely supported. Wooden plugs inserted in masonry or concrete shall not be used as a base to secure boxes. Boxes shall be secured by galvanized brackets, expansion bolts, toggle bolts, or machine or wood screws depending on the type of construction.

8-27.2(5)C Handholes

Conduits entering handholes shall have grounding bushings installed and the conduit ends shall be sealed with Permagum sealing compound. Where conduits enter through sides of handholes, the penetration shall be made watertight.

8-27.2(5)D Trenching and Backfill

The contractor shall provide trenching and backfill for all Puget Sound Energy Conduit and transformer installation. All such trenching and backfill shall be done in accordance with PSE requirements.

All other trenching and backfill shall be done as follows: The contractor shall excavate trenches to a minimum depth of 28 inches below finished grade. Minimum depth under roadways shall be 36 inches. After trench excavation, the bottom of the trench shall be trimmed by hand to prepare a smooth, even bed.

After the conduit has been installed the trench shall be backfilled 12 inches deep, loose measurement with 5/8 inch minus crushed gravel. This layer is to be compacted to 95% maximum density using a small vibration of mechanical compactor.

Following initial compaction, a yellow warning tape shall be placed in the trench. The warning tape shall be of a non-biodegradable material and shall have the words “caution buried electrical conductors below”, or equivalent. A separate foil type warning tape is to be installed directly above PVC conduits which have been installed as spares, for future location of the conduit.

The trench shall be completely backfilled and tamped and compacted to at least the density of adjacent undisturbed soil. Compacted backfill shall be tamped level with adjacent surfaces. Any excess excavated material shall be removed and disposed of in accordance with instructions issued by the engineer.

8-27.3 Wire and Cable

8-27.3(1) Description of Work

This section covers furnishing and installation of all wiring used in the construction of the Trend Wastewater Lift Station. All wiring shall be in raceways.

8-27.3(2) Standards and Codes

All materials and equipment specified herein shall be approved by the Underwriter's Laboratories or other Washington State approved testing agencies, for the purpose for which they are used and shall bear the testing agencies’ label.

All materials and equipment specified herein shall conform to all applicable NEMA, ANSI and IEEE standards.

All materials and equipment specified herein, and their installation methods shall conform to the latest enforced version of the National Electric Code (NEC).

8-27.3(3) Submittals

Submit catalog data showing material information and conformance with Division 9 of these specifications. The intended use of each item shall be indicated**.**

8-27.3(4) Installation

8-27.3(4)A General

Keep all conductors within the allowable tension limits during installation. Lubricants for wire pulling, if used, shall be approved for the insulation and raceway material. Observe cable Manufacturer's and industry standard cable bending radius recommendations.

Incoming cables in panels and motor control centers, No.6 AWG and smaller, shall be bundled and laced at intervals not greater than six inches and neatly spread into trees and connected to their respective terminals.

Sufficient slack shall be allowed in cables for alterations in terminal connections. Lacing shall be done with plastic cable ties using a tensioning tool designed for that purpose.

Cables crossing hinges shall be made up into groups not exceeding 12 and shall be so arranged that they will be protected from chafing when the hinged member is moved.

8-27.3(5)B Wire and Cable Termination

Power conductors No. 8 AWG and larger may be terminated directly in box-type lugs without terminals. Insulated terminals of the spade or ring-tongue type shall be used on all stranded control and power conductors No. 12 AWG and smaller. Insulated terminals shall be used also on all stranded instrumentation wiring. Special instrumentation cables shall be terminated in accordance with the recommendations of the Manufacturer of the equipment and subject to review by the Engineer.

Terminals and connectors shall be installed with the compression tool recommended by the terminal manufacturer. Solid wire shall not be lugged but shall be terminated with a full ring eye of the wire under the binding-head screw or saddle of the terminal block. Electrical spring connectors may be used only on lighting circuits.

No splices shall be used in power, control and signal wiring. The wiring shall be continuous from point-to-point. Extending existing cables will not be allowed.

8-27.3(5)C Control Wire Labeling

Power conductors No. 8 AWG and larger may be terminated directly in box-type lugs without terminals. Insulated terminals of the spade or ring-tongue type shall be used on all stranded control and power conductors No. 12 AWG and smaller. Insulated terminals shall be used also on all stranded instrumentation wiring. Special instrumentation cables shall be terminated in accordance with the recommendations of the Manufacturer of the equipment and subject to review by the Engineer.

Terminals and connectors shall be installed with the compression tool recommended by the terminal manufacturer. Solid wire shall not be lugged but shall be terminated with a full ring eye of the wire under the binding-head screw or saddle of the terminal block. Electrical spring connectors may be used only on lighting circuits.

No splices shall be used in power, control and signal wiring. The wiring shall be continuous from point-to-point. Extending existing cables will not be allowed.

8-27.3(5)D General Tests

The Contractor shall provide all material, equipment, labor and technical supervision to perform tests and inspections as specified herein. It is the intent of these tests to assure that all electrical equipment as supplied and installed by the Contractor is operational within the industry and Manufacturer's tolerances and is installed in accordance with design documents.

Tests shall be done in accordance with the methods and procedures indicated in ANSI/NETA MTS - 2015

If the test results indicate that corrective measures are required, the Contractor shall undertake all such corrective measures. No additional compensation will be paid for corrective measures.

While performing tests specified herein, the Contractor shall complete the conductor test report attached at the end of this section.

Test reports must be submitted to the Engineer prior to final acceptance by the Owner.

A. Conductor tests: Following the completion of installation, test conductors as follows:
   1. Visually inspect exposed sections of all conductors for physical damage. Verify that cable is supplied and connected in accordance with specifications and one-line diagram.

   2. Perform continuity test on all conductors to ensure proper cable connection.

   3. Perform voltage and insulation resistance tests on service entrance conductors.

B. Ground electrode test: Following completion of the grounding electrode system, measure ground resistance at each ground rod using the three rod method.

C. Test Values

   Test values shall be in accordance with the referenced ANSI/NETA MTS – 2015 Standards.

8-27.3(5)C FIELD CONTROL CONDUCTOR LABEL SCHEDULE

Page of

PROJECT: Trend Lift Station	**OWNER: City of Kirkland**	
CONTRACTOR CO. NAME: **LABELED BY:**		**DATE:**
LABEL TEXT	**FROM: (SOURCE)**	**TO:**

NOTES/REMARKS:

8-27.3(5)D	CONDUCTOR TEST REPORT	Page 1 of 1
PROJECT: TREND LIFT STATION	OWNER: CITY OF KIRKLAND	
CONTRACTOR CO. NAME: TESTED BY:	PHONE NO.: TEST DATE:	

Cond. Label (1)	Vis (2)	Con (3)	Operating Load Voltage						Insulation Resistance – OHMS					
			VAB	VCB	VCA	VAN	VBN	VCN	A-B	B-C	C-A	A-G	B-G	C-G

(1) Refer to conduit and cable schedule and one-line diagram for description of feeder identified by label shown on this report.	(2) Visual Inspection - Check when completed.	(3) Continuity Test - Check when completed.

8-27.4 Wiring Devices

8-27.4(1) General

This section covers furnishing and installing all receptacles, switches and other wiring devices indicated on the drawings.

8-27.4(2) Standards and Codes

All materials and equipment specified herein shall be approved by the Underwriter's Laboratories or other Washington State approved testing agencies, for the purpose for which they are used and shall bear the testing agencies' label.

All materials and equipment specified herein shall conform to all applicable NEMA, ANSI and IEEE standards.

All materials and equipment specified herein and their installation methods shall conform to the latest enforced version of the National Electric Code (NEC).

8-27.4(3) Submittals

Submit catalog data showing material information and conformance with specifications. The intended use of each item shall be indicated.

8-27.4(4) Position of outlets

Install symmetrically and plumb all receptacles, switches and outlets

8-27.4(5) Mounting Heights

Wall mounted outlet devices shall generally be 24 inches above the floor, 18 inches in architecturally treated areas. Switches shall be 48 inches above the floor.

8-27.5 Electrical Service Modifications and Equipment

8-27.5(1) Description of Work

The work consists of providing a new 480Y/277 Volt, 3 Phase, 4 Wire, 60 Amp, Electrical Service to the Trend Lift Station. The service shall originate at the Puget Sound Energy Point of Service, which will be at the secondary terminals of a PSE owned new padmount transformer and extend to new service equipment in the Electrical Equipment Enclosure. The work also consists of providing the Service entrance and distribution electrical equipment indicated on the drawings or specified herein.

8-27.5(2) Utility/Contractor Responsibilities

The electrical utility company providing primary service to these facilities is Puget Sound Energy (PSE). During design, contact was made with Customer Service Representative Abdulrehman Kamel. Abduel can be contacted by telephone at 425-748-6382 or by email at Abdulrehman.Kamel@pse.com

The Contractor shall fully and completely be responsible for all temporary power service and energy charges during the period of construction.

The Contractor shall be fully and completely responsible for all scheduling and coordination with the utility company. The Contractor shall contact the utility company to coordinate scheduling of power outages and to verify responsibilities.

The Contractor shall perform all work in accordance with PSE requirements.

The Contractor shall pay all utility charges due that are associated with the utility work associated with the permanent electrical services. The contractor will be reimbursed at direct cost with no mark up for these utility charges in accordance with the Contract.

During design the following scope of work was discussed with PSE, however it shall be the contractors responsibility to verify this scope and perform all work that deviates from this scope if required by PSE.

PSE will perform the following work:

A. Provide Primary Power conduit and conductor from overhead primary power conductors, down the pole and underground to a new padmount transformer.

B. Provide an underground vault with lid for the padmount transformer

C. Provide a padmount transformer

The Contractor shall perform the following work:

A. All trenching and backfill in accordance with PSE requirements for the installation of the primary power conduit and padmount transformer.

B. Provide secondary service conduit, conductor, meter socket, and service disconnect.

C. Coordinate with PSE regarding location of service conduit into vault and routing of conductor in vault.

8-27.5(3) Standards and Codes

Work involving service installation shall be done in accordance with Puget Sound Energy standards and requirements.

Service equipment shall be listed and labeled by UL as "suitable for use as service equipment".

8-27.5(4) Submittals

Submit catalog data showing material information and conformance with specifications on the following:

A. Meter Sockets

B. Service Entrance Disconnects
C. Mini Power-Zone
D. Manual Transfer Switch
E. Surge Protector Device
F. Electrical Equipment Enclosure
G. Meter Enclosure
H. Heat Trace Cable
I. Ground Rods
J. All miscellaneous equipment required.

8-27.5(5) Equipment Enclosure Mounting

The electrical equipment enclosure shall be mounted on a concrete slab in accordance with the enclosure manufacturers recommendations using leveling grout as indicated on the drawings. A minimum of 4 feet of clear space shall be provided in front of all enclosures. Concrete bases shall be sloped to drain away from the enclosure.

8-27.5(6) Electrical Equipment Mounting

Electrical equipment shall be mounted where indicated on the drawings using stainless steel hardware and fasteners sized as required for a secure installation. Mounting heights shall be in accordance with the drawings, requirements of the NEC and the serving utility company. Equipment shall be mounted level and square with enclosure sides.

8-27.5(7) Grounding Electrode System

The grounded conductor and ground bus shall be connected to the grounding electrode system, via the grounding electrode conductor as indicated on system one-line diagrams.

The system shall be as indicated in Article 250 of the National Electrical Code, as called out on the drawings, and shall comply with local codes and ordinances.

8-27.5(8) Installing Heat Tape

Wrap heat tape around the pipe. After wrapping provide 1” foam pipe insulation over heat tape and pipe.

8-27.6 Control and Pump Control Panels

8-27.6(1) Description of Work

The work includes the equipment, devices, and components for sensing and indicating the level in the wet well, controlling and displaying the status and operation of the pumps, indicating, and transmitting all status and alarm conditions to the City of Kirkland’s central monitoring location.

8-27.6(2) System Description

The work shall include, but not be limited to the following:

A. Provide a custom Pump Control Panel (PCP) for the Trend Lift Station consisting of circuit breakers, soft start motor controllers, relays, and miscellaneous equipment as indicated on the drawings and as required to provide a complete and operable pump control system. The PCP shall contain a winding temperature sensing relay and moisture sensing relay to monitor conditions in the submersible pump as well as a phase monitor/fail relay and all additional relays and equipment as required to operate the pumps. The control components shall be supplied and installed as an integrated system which includes all accessories necessary for operation.

B. Provide a custom Control Panel (CP) to control and operate the pumps at the Trend Lift Station. Provide a complete level control system consisting of a Programmable Logic Controller, Graphic User interface to indicate wet well level, pump status, and alarm conditions. The CP shall sense level by way of a submersed pressure transducer. The CP shall also include a backup float control system in event of any component failure of the primary level sensing system. The CP shall include all associated control equipment, float switches, relays, indicating lights and selector switches. The control components shall be supplied and installed as an integrated system which includes all accessories necessary for operation. The Systems Integrator of the control system shall assemble the system to provide the control functions and sequences indicated by the drawings and specifications.

C. The CP shall include cellular data transmission equipment to transmit all status and alarm conditions to the City of Kirkland monitoring location.

D. The PCP and CP shall be an integrated system supplied by one system integrator and shall be composed of components which are specifically designed and used for control and operation of pumping equipment, and which are standard, catalog listed products.

8-27.6(3) Responsibility of Contractor and System Integrator.

The PCP and CP shall be provided by a single System Integrator approved by the City of Kirkland. The System Integrator of the PCP & CP shall be fully and completely responsible for the design and assembly of the systems as specified herein and shall be enjoined by the Contractor as a Subcontractor. The assignment of specific responsibilities herein to the System Integrator shall not, in any way and under any conditions, diminish or usurp the Contractor's full and complete responsibility for all work performed and all materials installed under the contract. The contract between the Contractor and the System Integrator shall specifically require that the System Integrator conform to and meet all requirements specified herein.

8-27.6(4) Standards and Codes

All equipment and materials shall conform to the latest revised editions of applicable standards published by the following organizations:

- American National Standards Institute (ANSI).
- Institute of Electrical Manufacturers Association (NEMA).

- National Electrical Manufacturers Association (NEMA).
- Underwriters' Laboratories (U/L).
- Instrument Society of America (ISA).
- National Fire Protection Association (NFPA 20).
- National Electrical Code (NFPA 70)

All electrical equipment and materials, and the design, construction, installation, and application thereof shall comply with all applicable provisions of the National Electrical Code (NEC), the Occupational Safety and Health Act (OSHA), and any applicable Federal, State, and local ordinances, rules and regulations.

All materials and equipment specified herein shall be approved by the Underwriter's Laboratories or other Washington State approved testing agencies, for the purpose for which they are used and shall bear the testing agencies' label.

The custom PCP and CP shall bear a UL label for the completed assembled control system panel.

8-27.6(5) Shop Drawings

The System Integrator and assembler of the custom panels shall develop all shop drawings required for design, fabrication, assembly, programming, and installation of the system. Shop drawings shall include the manufacturer's drawings of all components and assembly and installation of the system.

Installation details shall include the size, number, type and location of all interconnecting wiring between the custom panels and all other cabinets, enclosures, sensors and equipment which must be connected to or with the custom panels. Shop drawings shall be submitted to the Contractor for review and approval. After approval by the Contractor, copies of all shop drawings shall be provided to the Engineer for review.

8-27.6(6) Submittals

The PCP & CP System Integrator shall develop, and the Contractor shall submit to the Engineer, for review and approval, the following project data:

A. Schedule of materials listing all equipment and components to be provided.

B. Technical data sheets for all components.

C. General arrangement and dimensional drawings of the Pump Control Panel and Control Panel with all panel front- and internal-mounted equipment indicators, switches and devices indicated.

D. Interconnecting wiring diagrams complete with terminal numbers and showing all panel and field-mounted equipment and components.

8-27.6(7) Warranty

In accordance with the requirements of the applicable section of this specification, the

Contractor shall guarantee the custom panels systems to be free of defects in design, materials and workmanship for a period of one (1) year following the date of acceptance, by formal action of the Owner.

As part of the guarantee, the Contractor and the System Integrator and assembler of the custom Pump Control Panel and Control Panel shall indemnify and hold harmless the Owner, the Consultant and their officers, agents, and employees against and from all claims and liability arising from all damage and injury due to defects in the system.

The Contractor shall cause the System Integrator and assembler of the custom panels to make any and all repairs, replacements, modifications, and adjustments within thirty-six (36) hours of notification. Should the manufacturer fail to begin the work within 12 hours or fail to complete the work within 36 hours, the owner may proceed to undertake or complete the work. In such event, the Contractor and his surety shall be liable for all costs incurred by the Owner.

8-27.6(8) Factory Testing

Operation of the complete panels shall be tested in the shop by the System Integrator using the System Integrator's standard test procedure. The Factory Testing shall be witnessed by the Engineer.

8-27.6(9) Operation and Maintenance Data

The System Integrator of the custom panels shall prepare and assemble detailed operation and maintenance manuals in accordance with the requirements of the applicable sections of this specification. The manuals shall include, but not limited to the following:

- Preventative maintenance procedures
- Trouble-shooting
- Calibration
- Testing
- Replacement of components
- Automatic mode operation
- Manual mode operation
- System schematics
- As-built wiring diagrams
- Catalog data and complete parts list for all equipment and control devices
- Listing of recommended spare parts
- Listing of recommended maintenance tools and equipment

8-27.6(10) Description of Operation

The PLC and OIT shall be programmed to accomplish the following description of operation:

A. The CP shall control the operation of two sewage pumps based on the level in the wet well or by manual control. The control shall be via a Operator Interface Terminal (OIT) in conjunction with a Programmable Logic Controller (PLC). Status of the operation, alarms and visual depiction of

the system shall be via the graphic user interface panel. Also, the adjustment of level set points and timers shall be made via the OIT. Accumulated run times of the pumps shall also be visible on the OIT.

B. The level shall be monitored via a submersed pressure transducer sensor. On wet well level rise, the lead pump shall start when the level set point is reached. The lead pump shall operate to pump the level down to the lead pump off set point. If the lead pump is unable to pump the level down, and the level continues to rise until the lag pump set point is reached, then the lag pump shall start, and both pumps shall operate until the lag pump off set point is reached. If the level continues to rise until a high wet well level is reached, then an alarm shall be initiated. If one or both pumps fail to stop, and a low water set point is reached, then an alarm shall be initiated. Pump operation shall alternate after each pump runs.

If the level in the wet well rises above the high level alarm set point, the float system shall become active. The lead pump on float shall activate and call the pump to operate down to both pumps off float. In addition, an alarm shall be initiated indicating that float system is activated. When the float system is activated, it shall remain the control method until the float system activated condition is acknowledged and the system is reset to PLC control.

B. If a pump should fail to operate when called, an alarm shall be initiated. Pump operation normally should be as follows: when a pump is called to operate a timer is also initiated. The check valve on the pump discharge should open before the timer times out. If the check valve does not open and the pump is running, a pump fail condition shall be initiated. Also, if the pump is stopped and the check valve is not closed an alarm condition shall be initiated. Pump fail alarm shall also be initiated if the motor starter indicates an overload or if the motor winding temperature detector operates or if the motor moisture detector operates.

C. An alarm shall be initiated if intrusion is detected. Normal operation is when an intrusion sensor is opened, a timer begins. If the key operated disable switch is not closed within the preset time, an intrusion alarm shall be activated.

D. The alarm system shall function so that when an alarm is received, an audible and visual indication is given. When the alarm is acknowledged, the audible signal shall cease but the visual indication shall remain until the alarm is corrected. The alarm conditions shall be transmitted via cellular data transmission to the City of Kirkland monitoring location

8-27.6(11) Installation

The PCP and CP custom panels shall be installed by the Contractor or, at the option of the Contractor, by the Systems Integrator of the panels in accordance with the installation drawings and instructions prepared by the Systems Integrator. Installation shall be performed by workers who are skilled and experienced in the installation of electrical instrumentation and control systems.

Installation shall include all elements and components of the panels and all interconnecting wiring between all equipment, components, and sensors. All wiring between cabinets, sensors and equipment shall be labeled at both ends for ease of servicing.

All terminations shall be made with solderless pressure connectors. All wiring shall be in accordance with the requirements of Section 8-27.3

8-27.6(12) Inspection and Verification of Installation

After completion of the installation of the custom panels, the Systems Integrator of the custom panels shall inspect the installation and verify that all components and wiring are correctly installed. If not installed correctly, the Systems Integrator shall determine the exact scope and nature of work required to correct deficiencies and errors in the work and shall supervise the performance of such work.

8-27.6(13) Calibration and Start-up

All components of the panels shall be calibrated by the Systems Integrator after completion of installation. Each component shall be adjusted to be within the required range and for the specific application. Components that cannot be properly calibrated or that are found to exceed the specified range or accuracy shall be removed and replaced.

After completion of construction of the lift pump stations, the panels shall be placed into operation by the Systems Integrator. Start-up shall be performed by representatives of the Systems Integrator who are skilled and experienced in the start-up of electrical instrumentation and control systems.

The Systems Integrator of the custom panels shall be solely and completely responsible for all maintenance of the system from time of start-up to the date of acceptance by formal action of the Owner, of all work under the contract. The Systems Integrator shall correct all deficiencies and defects and make any and all repairs, replacements, modifications and adjustments as malfunctions or failures occur. The Systems Integrator shall perform all such work required or considered to be required by the Owner to cause and maintain proper operation of the system and to properly maintain the systems.

The Contractor and the Systems Integrator of the custom panels shall anticipate that the Owner may delay acceptance of all work under the contract if, in the judgment of the Owner, malfunctions or failures in operation of the panels occur after start-up. Both the Contractor and the Systems Integrator shall not be entitled to an extension of time or to any claim for damages because of hindrances, delays or complications caused by or resulting from delay by the Owner in accepting the work because of malfunctions or failures in operation of the panels.

8-27.6(14) Operation and Maintenance Training

The Systems Integrator of the custom panels shall conduct specifically organized training sessions in operation and maintenance of the panels for personnel employed by the Owner. The training sessions shall be conducted to educate and train the personnel in maintenance and operation of all components of the panels. Training shall include,

but not be limited to, the following:

- Preventative maintenance procedures
- Troubleshooting
- Calibration
- Testing
- Replacement of components
- Automatic mode operation
- Manual mode operation

One (1) training session of at least two (2) hours in duration, shall be conducted at the lift station (after start-up of the systems). The training shall include instruction and operation of the custom panels and all associated electrical equipment and devices. The Systems Integrator shall prepare and assemble specific instruction materials for the training session and shall supply such materials to the Owner at least four (4) weeks prior to the time of the training.

END OF DIVISION 8

GSP DIVISION 9

City of Kirkland

DIVISION 9 – MATERIALS

(*****)

9-04 JOINTSEALING MATERIALS

Supplement Section 9-04 by adding the following:

9-04.13 Watertight Pipe to Manhole Connection Boot

Provide Kor N Seal®, A•Lok, or equal watertight pipe to manhole connection boot.

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9-14 EROSION CONTROL AND ROADSIDE PLANTING

9-14.1 Materials Submittals and Acceptance

Supplement section 9-14.1 with the following:

9-14.1(1) Soils

1. Provide following soils and soil mixes specified on Drawings or by the Engineer, according to project needs, and subject to the General Testing and Submittal Specifications of Section 9-14.1(1) of these Special Provisions, Topsoil Type A – Imported. Provide a general purpose mix of sandy loam and compost as needed to comply with the minimum organic matter content requirements.
2. General Turf Area Soil. Provide an imported soil mix for passive-recreation turf areas.

9-14.1(2) General Testing and Submittal Requirements

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Submit to the Engineer at least 10 working days prior to any soil placement specified in this Section the following as specified in Section 1-05.3 – SUBMITTALS. Provide test results from samples collected and tested within 90 days of submittal.

1. Aggregate and Loam Analysis. Provide grain size analysis results of the Mineral Aggregate or sandy loam portion of each soil mix and performed by an accredited laboratory per ASTM C 136.
2. Compost Analysis. Provide quality analysis results for the compost portion of each soil mix performed per STA standards as specified in Section 9-14.4(8).
3. Mix Analysis. As a minimum, provide test results from an accredited soil laboratory for the following content values:
   a. Total Nitrogen and Soluble Nitrogen (NO3 + NH3)
   b. Phosphorous
   c. Potassium
   d. pH
   e. Organic Matter percent (Loss on Ignition method)
   f. Cation Exchange Capacity
   g. Calcium
   h. Sulfur
   i. Magnesium
   j. Sodium
   k. Iron
   l. Boron
   m. Weed Seed (for general turf area mixes)

4. . Provide fertilizer and amendment and soil application depth recommendations from accredited soils laboratory, soil scientist or agronomist for the specified plant type.
5. Mix samples. Provide two 1-quart samples of each soil mix.
6. Manufacturer. Provide manufacturer's certificate of compliance as specified in Section 1-06.3 – MANUFACTURER'S CERTIFICATE OF COMPLIANCE from the soil mix Supplier and compost Supplier if different from soil mix Supplier. Include names and address on certificate.
7. Laboratory information. Include the following:
    a. Name of laboratory including contact person,
    b. Address,
    c. Phone number of contact,
    d. Email address of contact,
    e. Laboratory and personnel qualifications including current certification date by STA, ASTM, ASSHTO, or approved equal.
8. Acceptance of Soils Prior to Placement. Placement of any soils or soil mixes specified in this Section will NOT be allowed until Engineer has reviewed and confirmed the following:
    a. Soil mix delivery tickets. Provide delivery tickets showing full delivered soil amount matches product type, volume and Manufacturer named in the submittals.
    b. Visual inspection. Engineer will compare delivered product to product submitted to very it matches the submitted sample.

Engineer may inspect any loads of soil on delivery and stop placement if it is determined the delivered soil doesn't appear to match the submittals and require sampling and testing of delivered soil before authorizing soil placement at sole cost to Contractor.

9-14.2 Topsoil

Delete section 9-14.2(1) and replace with the following:

9-14.2(1) Topsoil Type A – Imported

Provide Topsoil Type A consisting of an imported sandy loam as defined by the United States Department of Agriculture Classification System, and documented by a particle size analysis performed by an accredited laboratory.

Provide Topsoil Type-A having an organic matter content of at least 5 percent by dry weight, as determined by Loss-on-Ignition test (ASTM D2974, or TMECC 05.07A) where turf will be installed and meeting the following requirements:

Nutrient	Test	Unit	Range
Phosphorous	Bray	mg/kg	>20
Potassium	NH4OAc	mg/kg	>175
Boron	DTPA	mg/kg	>0.5
Zinc	DTPA	mg/kg	>5
Manganese	DTPA	mg/kg	>20
Iron	DTPA	mg/kg	>20
Calcium	NH4OAc	mg/kg	>6
Magnesium	NH4OAc	mg/kg	>2
Sodium	NH4OAc	mg/kg	<2
Cation Exchange	CEC	meq/100g	>6
pH			6.5 – 7.5
Nitrogen		lbs/ac	>200

In addition to meeting the particle size requirements of USDA sandy loam, Topsoil Type-A must meet the following sieve Specifications:

Sieve Size	Percent Passing
1"	100

1/2”	>90
No. 10	>70

Provide Topsoil Type A free from materials toxic to plant growth, visible seeds, rhizomes, roots, any Snohomish County listed noxious weeds or invasive root propagating plants, including and not limited to, horsetail, ivy, clematis, and knotweed. Contractor shall remove and replace soil found to contain these prohibited plant materials.

9-14.4 Fertilizer

Supplement this section by adding the following:

Provide 12-25-10 starter fertilizer.

9-14.5 Mulch and Amendments

9-14.5(8) Compost

Supplement 9-14.5(8) by adding the following:

Procure compost manufactured by facilities that have an active solid waste handling permit from the local jurisdictional Health Department as per WAC 173-350-220 or WAC 173-308.

SECTION 9-29 ILLUMINATION, SIGNAL, ELECTRICAL

(November 13, 2018 COK GSP)
9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

9-29.2(1) Standard Duty and Heavy Duty Junction Boxes

Section 9-29.2(1) is supplemented with the following:

Junction boxes with metal lids located in pedestrian walkway or sidewalk areas shall have non-slip lids provided and installed. Retrofit or replacement lids shall be non-slip.

9-29.2 (1) A2 Non – Concrete Junction Boxes

Non-concrete junction boxes shall not be accepted in the City of Kirkland.

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ADD NEW SECTION 9-37

9-37 LIFT STATION MATERIALS

Materials herein shall be furnished and installed by the Contractor:

9-37.1 – Wastewater Pumps

Two identical wastewater submersible explosionproof solids handling wastewater pumps shall be provided and installed in the lift station wet well. A third, identical pump assembly, not including discharge elbow, shall be provided to the City, delivered to the City’s Public Works Maintenance facility. Pumps shall be vertical, submersible motor-driven solids handling pumps with discharge elbow, guide rails, and all appurtenances required for a complete installation

per Section 8-26. Pumps shall be Flygt Model NP 3085 SH 3 ~255 with an output of 160 gpm at 55 feet total dynamic head and N-Impeller suitable for raw domestic wastewater service. Pump shall have a 4 HP submersible motor operating at 3455 rpm using 460V/3Phase/60Hz power.

Pumps shall have a gray cast iron housing and impeller meeting ASTM 35B. Lifting handle, screws, and nuts shall be 316L SS. Shaft shall be 431 SS. Mechanical seal materials, and all other materials not specified herein, shall be per manufacturer's recommendation for long service life in submerged wastewater service.

A sliding guide bracket (guide rail) assembly shall be supplied as part of the pump unit along with appropriate 316L SS hardware. Guide rails shall be 316L SS. Installation of the pump unit to the discharge connection shall be the result of a simple linear downward motion of the pump unit. No other motion of the pump unit, such as tilting or rotating, shall be required.

The design of each pump shall be such that the pump units will be automatically and firmly connected to the discharge piping when lowered into place to meet the mating discharge connection which shall be permanently installed in the wet well. Each pump shall be easily removable for inspection or service, requiring no bolts, nuts or other fastenings to be disconnected. For this purpose, there shall be no need to enter the wet well. Flygt pumps describe this as a "P" installation.

The motor shall be a squirrel-cage induction motor with a line started permanent magnet motor (LSPM) allowing for the voltage/Phase/Frequency as called for on the plans.

Thermal sensors shall be provided to monitor stator temperature. Sensors shall interrupt the motor control circuit. Each unit shall be provided with an adequately designed cooling system that shall be adequate to provide the cooling required by the motor. Water jacket or other device shall not be necessary for continuous pumping at sump liquid levels below mid-point of stator housing.

Each pump shall be equipped with a power cable consisting of adequate length to connect to the junction box as shown on the electrical drawings. Power cable shall be rated for explosion proof environment. Each power cable connection to the pump shall be comprised of a watertight sealing system.

Each pump shall be equipped with stainless steel lifting chain and shackles as necessary to connect lifting chain to the pump. Chain shall have a rated weight capacity of at least 150% of the weight of the pump.

Each submersible sewage pump shall be equipped with one (1) guide rail assembly per installed pump. The access frame shall be equipped with an upper guide bar holder for each installed pump. Contractor shall coordinate installation of guide rails with access door location. All hardware shall be stainless steel.

9-37.2 Plug Valves

Provide Plug Valves in accordance with the Contract Plans.

Plugs shall be solid one piece, Cast Iron ASTM A126 Class B. The plug shall have a cylindrical seating surface eccentrically offset from the center of the shaft. Plug shall not contact the seat until at least 90% closed. Resilient plug facing shall be Chloroprene (CR) or as required for application. Spherical shaped plugs are not acceptable.

Manufacturer shall be DeZURIK or Equal.

Bodies shall be Cast Iron ASTM A126 Class B. Ports shall be rectangular. Round ports are not acceptable. Bearings shall be sleeve type and made of sintered, oil impregnated permanently lubricated type 316L sintered stainless steel.

Pressure rating shall be 175 psi (1210 kPa). Every valve shall be given a certified hydrostatic shell test and seat test, with test reports being available upon request.

End Connections shall be ANSI 125 flanged connections. Valves shall have quarter-turn operation with 2" operating nut. Provide one removable lever handle per valve.

9-37.3 Check Valves

Provide Swing Check Valves in accordance with the Contract Plans.

Check valves shall be a Val-Matic Swing Check or equal, fully automatic in operation and specifically suited to serve in wastewater applications with solids present. Swing check valves shall contain a flexible disc with no other moving parts. Provide a level-style mechanical indicator as well as a limit switch for each valve per the Plans.

Bodies shall be Ductile Iron ASTM A536, Grade 65-45-12. Seat shall be constructed at an angle to reduce disc travel. The seat and body shall be epoxy coated for wastewater service. Valves shall be equipped with a backflush device.

Pressure rating shall be 175 psi (1210 kPa). Maximum operational backpressure shall be 36 psi. Valve shall be rated for at least 150% of the maximum operational backpressure.

End Connections shall be ANSI 125 flanged connections.

9-37.4 Pressure Gauges

Provide Pressure Gauges in accordance with the Contract Plans.

Manufacturer shall be Red Valve Model 40 or Equal.

Gauge shall reside between the flanges of the pipe to provide continuous pressure readings. Gauge shall be glycerin filled with a 0-100 psi range.

9-37.5 Reduced Pressure Backflow Assemblies

Provide RPBA in accordance with the Contract Plans.

The RPBA shall be a ¾" Watts LF009 or equal, with isolation valves and quick test ports. RPBA shall conform to the following:

- Listed in the current list as published by the Foundation for Cross-Connection control and Hydraulic Research website.
- Meet all specifications of AWWA C511, ASSE 1013.
- Listed by the Washington State Department of Health as approved for installation as an RPBA in Washington State.

9-37.6 Access Doors

Contractor to furnish and install access doors where indicated on the Plans. Manhole access is described elsewhere in the Manual and the Standard Details. All access doors (a.k.a. hatches) shall come with a five-year manufacturer warranty.

MATERIALS shall be as follows:
Design Load: H-20.
Door Leaf: Aluminum checkered plate, 1/4 inch minimum.
Frame: 1/4 inch aluminum with anchor flange.
All hatches to be weather tight and have 1-1/2 inch drain coupling in corner of frame.
Fall Protection Grating: 300 psf load rated, safety yellow or orange, aluminum or molded fiberglass with lift assist and hold-open arm. Locate hinges where indicated on Plans, but so hinges do not interfere with personnel access or pump installation or removal.
Hardware: All stainless steel -- hinges, springs, spring operators, and automatic hold open arm with release handle.
Lock: recessed padlock hasp with hinged cover.
Finish: Mill finish with bituminous coating on exterior of frame where in contact with concrete.

Manufacturers shall be LW Products or approved equal.

9-37.7 Heated Enclosure

Contractor to furnish and install a heated reduced pressure backflow assembly enclosure where shown on the plans. Enclosures shall be Safe-T-Cover Model 75SN-AL or equal, suitable to provide the needed clearances for the proposed RPBA.

Performance requirements shall be as follows:

- Insulation shall be R-9 or better and suitable for long term exposure to weather (polyisocyanurate foam laminated on both sides or equal).
- Roof and walls shall be 18-gauge marine grade aluminum.
- Clear opening drain panel area shall be 17-1/4” W x 4” H or larger.
- Enclosure shall have hinged roof and hinged drop down panel access in the front of the enclosure for testing and maintenance.
- The drain flap shall have a stainless-steel hinge and a stainless-steel light strength spring as a positive means of closure so that it will not be activated by wind.
- The drain flap shall be constructed of the same materials that is used in the walls and roof of the enclosure. Heating equipment shall be furnished and designed by the manufacturer of the enclosure to maintain an interior temperature of +400F with an outside temperature of -300F. Install heating equipment as per manufacturer's instructions and governing local and national codes. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
- Uplift Rating: UL 90.

9-37.8 Cementitious Waterproofing

Contractor to furnish and install cementitious waterproofing of all concrete structures above and below grade. Utilize material manufactured by Xypex or approved equal.

Use Gamma Cure curing compound in accordance with manufacturer’s written instructions.

9-37.9 Precast Concrete Structures

Contractor to furnish and install precast concrete structures as called for on the Plans.

Structures shall be manufactured by Oldcastle Infrastructure, H2 Precast, Cuz Concrete, or equal.

All structures shall:

- Conform to ASTM C913 and C478, latest editions as applicable

- Designed for AASHTO H-20 loading
- Designed with an assumed earth load of 130 pounds per cubic foot.

9-37.10 Coatings

Prepare existing and replacement precast concrete interior wet well surfaces (floor, walls, and ceiling) by abrasive blasting per SSPC-SP13 or as otherwise recommended by concrete coating/lining manufacturer. Concrete surfaces shall be prepared to achieve manufacturer-recommended conditions for application of coating or lining including appropriate moisture content. Prepare ductile iron pipe, fittings, and valves, per SSPC SP-1 solvent wash cleaning except prepare any damaged or corroded surface per SSPC SP-11 bare metal power tool cleaning. Finish surfaces per Finish Schedule in the Contract Plans using the following systems:

I-1 Valve Vault Piping and Valves: Prime Coat Tnemec Series 1 or approved equal, 3-5 mils dry; Finish Coat Tnemec Series 73 Hi-Build Urethane or approved equal, 3-5 mils dry

I-2 Wet Well Piping (not including discharge elbows and pumps): Prime Coat Tnemec Series 66 or approved equal, 3-5 mils dry; Finish Coat Tnemec Series 46 Hi-Build Tneme-Tar or approved equal, 14-20 mils dry.

C-1 Wet Well Interior Surfaces: Epoxytech CPP Troweliner or CPP Sprayliner at 125-150 mils DFT or Raven 405 Ultrabond at 125-250 mils DFT in a single coat (no thinning or dilution allowed)

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ADD NEW SECTION 9-38

9-38 WASTEWATER LIFT STATION ELECTRICAL MATERIALS

9-38.1 Raceways

Contractor to furnish and install all raceways.

9-38.1(1) Rigid Metal Conduit

All conduits shall be Rigid Metal Conduit, galvanized rigid steel conduit (GRC) unless otherwise noted. Rigid metal conduit (RMC) shall be steel, hot dipped galvanized. Terminations shall be by means of threaded hubs or double locknuts and insulating grounding type bushings.

9-38.1(2) PVC Coated Rigid Metal Conduit

Conduits in the wet well shall be PVC coated galvanized rigid steel. On PVC coated RMC conduit a PVC coating shall be bonded to the galvanized outer surface of rigid steel conduit. The bond between the PVC coating and the conduit surface shall be greater than the tensile strength of the plastic. The thickness of the PVC coating shall be a minimum of 40 mil nominal. A Urethane chemically cured coating shall be applied to the interior of all PVC coated conduit and fittings. Conduit and fittings shall be Robroy Plasti-Bond Red or engineer approved equal.

Loose couplings for PVC coated GRC conduit shall be furnished with each length of conduit. A PVC coating shall be bonded to the outer surface of the coupling and a PVC sleeve equal to the outside diameter or two inches, whichever is smaller. The wall thickness

of the coating on the coupling and the sleeve shall be a minimum of 55 mil.

9-38.1(3) Liquid Tight Flexible Metal Conduit

All connections to vibrating equipment or motors shall be made with liquid tight flexible metallic conduit or power cords furnished with the equipment. Flexible conduit shall be interlocking single strip, hot dipped galvanized and shall have a polyvinyl chloride jacket extruded over the outside to form a flexible watertight raceway.

9-38.1(4) Non-Metallic Conduit

Underground secondary power service shall be schedule 80 PVC. Where conduit changes from underground to above ground, elbow shall be PVC Coated Rigid Metal Conduit.

9-38.1(5) Fittings and Boxes

Unions shall be of the type designated as UNF and UNY and shall be suitable for use in moist atmospheres. Unions 1/2" to 1" shall be steel or malleable iron with zinc electroplate finish. Unions 1 1/4" to 3" shall be malleable iron with zinc electroplate finish.

Hubs for connection of conduit to boxes shall be of zinc. Hubs for use in corrosive areas shall be PVC coated zinc. The hubs shall provide a liquid tight connection to the box and an insulating bushing for the wiring. Hubs shall be Thomas and Betts - bullet type.

Connectors for liquid tight conduit shall be electroplated zinc malleable iron. An O-ring gasket and an approved grounding insert shall be part of the unit. Forty-five degree and 90 degree fittings shall be used where applicable. Liquid-tight connectors shall be by O.Z. Gedney.

Expansion fittings in exposed runs shall be of the weatherproof type and shall be provided with an external bonding jumper. The expansion fittings shall allow for 4 inches longitudinal movement and shall be designed so that when completely assembled, the end of each conduit entering the fitting is bushed. Fittings shall be O.Z. Gedney, Type EX.

Expansion fittings in embedded runs shall be of the watertight type and shall be provided with an internal bonding jumper. The expansion material shall be neoprene and shall allow for 3/4 inch movement in any direction. Fittings shall be O.Z. Gedney, Type DX.

Junction boxes; device boxes; fixture support boxes; and oblong, round, and rectangular conduit fittings (condulets) for use on galvanized rigid steel raceways shall be zinc electroplated cast ferrous alloy. Integrally cast threaded hubs or bosses shall be provided for all conduit entrances and shall provide for full five thread contact on tightening. Drilling and threading shall be done before finishing. The cover plate shall be of similar cast ferrous alloy material and finish. A full body neoprene gasket shall be provided with the cover. Stainless steel screws shall be provided for all covers. Outlet and device boxes shall be ganged where two or more devices are to be installed side-by-side. Device covers shall be provided with neoprene gaskets. Covers shall be of cast ferrous alloy finished as described for the box unless the particular device requires a cover that is not manufactured in this material.

Fittings and boxes in hazardous areas shall be rated for Class I, Division 1. Conduit fittings

shall be rigid steel. Seal fittings for hazardous areas shall be Crouse Hinds "EYS".

Fittings and boxes in hazardous areas shall be rated for Class I, Division 1. Conduit fittings shall be rigid steel. Seal fittings for hazardous areas shall be Crouse Hinds "EYS".

Where NEMA 12 boxes are called out, they shall be of heavy gauge sheet steel, or, if they are device boxes, they shall be cast metal. All NEMA 12 boxes shall be UL labeled, provided with a five-mil thick, light gray thermo-epoxy finish, and designed so that moisture will drain away from the gasketed cover joint. Covers for sheet steel boxes shall have turned edges, ground smooth to form a tight seal against the gasket when the cover is closed.

9-38.1(6) Bushings

General: Bushings shall be steel or malleable iron threaded type electroplated with zinc or hot dip galvanized. Bushings shall have a molded-phenolic or nylon insulating collar.

Grounding Bushings: Grounding-type bushings shall have a projecting portion drilled for the size grounding cable used and shall be provided with a clamp or set screw for securing the cable. In addition, a set screw shall be provided to securely lock the bushing to the conduit. Grounding bushings shall be Gedney Type IBC-LS, Type BL, or T&B No. 3870 through 3880.

Bushed Openings: Bushings for protection of cables passing through metal boxes or troughs shall be all phenolic type and shall be OZ Type ABB.

Cord Grip Bushings: Cord grip bushings shall be steel or malleable iron type electrogalvanized or hot dip galvanized. Cord grip bushings shall have a neoprene color coded bushing sized appropriately for the cord. Tightening one nut shall create a water tight seal. Cord grip bushings shall be as manufactured by Cooper Crouse-Hinds or equal.

9-38.1(7) Conduit and Cable Supports

Conduit clamps shall be of the one-hole type of hot-dip galvanized malleable iron. Clamp backs and nesting backs shall be of similar material and finish. Clamps shall be as manufactured by O.Z. Gedney Electric Company

Ceiling hangers for single conduit shall be of the adjustable wrought steel ring type. Hanger rods shall be 1/2-inch, all-thread rod. Hangers and rods shall be electro-galvanized after fabrication. Hangers shall be as manufactured by Grinnel Company.

Racks shall be constructed from framing channel. Channels and hanger rods shall be steel, hot dip galvanized, 1.5 ounces per square foot after fabrication. Field cuts shall be re-galvanized by the Galv-A-Weld process or by Gal-Van-Ize as manufactured by Lawson Products, Inc. Hardware shall be electro-galvanized. Channels attached directly to building surfaces shall be 14 gauge minimum thickness, 1 5/8 inches deep. Channel section shall be sufficient to limit deflection to 1/360 of span.

Framing channels on all exterior areas and in corrosive areas shall be fiberglass. All hardware shall be stainless steel. Hanger rods may be steel hot-dipped galvanized, 1.8 electrolysis. Channel section shall be sufficient to limit deflection to 1/360 of span.

9-38.2 Conductors

Conductors shall be copper. Conductors AWG No. 12 and smaller may be solid or stranded depending upon the application. Conductors AWG No. 10 and larger shall be stranded. Insulation shall be THWN, THHW, XHHW, or THW. Use of THW insulation shall require that the Contractor calculate conduit fill for all conduits shown in the conduit schedule. Conductors used for power circuits shall not be smaller than No.12. Control conductors shall be No. 14, unless otherwise specified in this section or on conduit and cable schedule.

9-38.2(1) Connectors

Utilize Ideal Industries' "Wing Nut" or 3M Company's "Scotchlock" preinsulated connectors for splices and taps in conductors No.10 AWG and smaller. For No. 8 AWG and larger conductors, utilize T&B compression connectors. Compress using recommended die and tools.

9-38.2(2) Splice Insulation

Splice insulation shall be equal to the conductor utilized.

9-38.2(3) Moisture Sealed Splices

Provide moisture sealed, direct bury splice kits for all splices made in handholes unless made in explosion proof J boxes. Kits are to be 3M Company Model No. DBR-6.

9-38.2(4) Shielded Signal Cable

Signal conductor cable shall be AWG #18 individually twisted, shielded pairs, Houston Wire & Cable Company # C09001804 or equal. Conductors shall be tinned copper with color coded 90 degrees PVC insulation and individual conductor jacket of nylon. Shielding shall be aluminum polyester 100 percent shield coverage with copper drain wire. The cable shall have an overall PVC jacket. The insulation system shall be rated for 600 volts.

9-38.3 Switches and Receptacles

Standard wall switches shall be single- or double-pole, standard or three-way, as shown on the drawings and shall be AC quiet type rated 20 amp, 125/277 volt with screw terminals. Wiring devices shall be ivory colored. Approved manufacturers are:

	Switch		Receptacle
Arrow Hart	1991 Series		5252 Series
Bryant	4901		5252
General Electric	5951	4060	
Hubbel	1221		5252
P&S	20AC1		5252

9-38.3(1) Plates

Scope: Provide a plate for each wiring device, for each signal or communication outlet.

1. Device plates for switches and receptacles in outdoor areas shall have weatherproof plates with a hinged cover and shall be Sierra Electric WP series or equal.

2. Plates on exposed wiring shall be of metal, of the same manufacture as the conduit fittings and specifically suited for the device and fitting used.

3. Provide blank, bushed, or special outlet plates for all signal communication system outlets.

9-38.4 Service Modifications and Equipment

9-38.4(1) Meter Socket

Meter socket shall be as required to meet the requirements of the serving utility for a 480Y/277 Volt 3 phase, 4 wire, 100 Amp service at Trend Lift Station. The Meter Socket shall be permanently labeled to indicate the address it serves. Labeling shall be with engraved phenolic nameplates at least 1 inch high and lettering a minimum of ¾ inch high. Meter socket shall be Eaton B-Line catalog number 117 TB or equal.

9-38.4(2) Service Entrance Disconnect

The Service Entrance Disconnect shall be fusible, 3 pole, 480 Volt 60 Ampere, NEMA 3R enclosure and shall be labeled as Suitable for Use as Service Equipment.

9-38.4(3) Fuses

Fuses for installation in the service entrance disconnect switches shall be sized as indicated on the drawings. Fuses shall be current-limiting, dual-element, time-delay type. Fuses shall be Bussman Low Peak LPS-RK1.

9-38.4(4) Manual Transfer Switch

Manual Transfer Switch shall be unfused on the normal side but fused on the emergency side, 3 pole, 480 Volt, 60 Ampere, NEMA 1 enclosure.

9-38.4(5) Mini Power-Zone

The Mini Power-Zone shall be plug on, 7.5 kVA, 1 phase, 480 Volt primary, 120/240 Volt secondary, 18 kA, 10 spaces, NEMA 3R enclosure for surface mounting, plug on breakers as indicated on the drawings.

9-38.4(6) Surge Protection Device

The Surge Protection Devices shall be in compliance with the latest edition of UL 1449. The Surge Protection Deviceshall be Type 2for use on 480Y/277 VAC, 3 Phase, 4 Wire at Trend Lift Station. The SPD shall be rated for 100 kA Per Phase Surge Current, 20 kA nominal current. The SPD shall have Line to Neutral, Line to Ground and Line to Line, and Neutral to Ground modes of protection. The SPD shall be Square D Type XDSE or equal.

9-38.4(7) Electrical Equipment Enclosure

The Electrical Equipment Enclosure shall be fabricated of 12 gauge 316 stainless steel.

The enclosure shall be open bottomed with 3/16 inch, 2 inch by 2 inch angle base and be sized as required to accommodate the components indicated on the drawings. The drawings indicate the enclosure to be nominally 6 feet high, 6 feet wide and 24 inches deep. However, the contractor shall verify that those dimensions are adequate for the components indicated and make all changes required to enclose the components.

The enclosures shall have double hinged and gasketed overlapping (no center post) doors. The enclosures shall have stainless steel weld on bullet hinges that allow for lifting off the doors. The doors shall have a stainless steel vault handle with roller rods to provide 3 point compression latching. The handle shall have padlocking provisions. The enclosure shall be a NEMA 3R rated U.L. enclosure.

Provide an overhanging drip shield above the doors and extending 4 inches on front and each side. Install on slab using leveling grout.

Provide lifting eyes to facilitate placement of enclosures. After installation remove lifting eyes and close openings with stainless steel washers and bolts. Calk under washers.

The enclosures shall contain a removable 12 gauge galvanized steel mounting pan on the back, with white powder coated finish.

Two 51/2" X 9" louver ventilation openings shall be provided, one at a low elevation and one high, located on the opposite sides of the enclosure. The louver vents shall be screened and gasketed to prevent entry of birds and or rodents.

The enclosure shall be furnished with at least four Phillips Cove EC Power Core LED lights for operation on 120 volts ac. The lights shall automatically be switched on when the doors open via a limit switch. Locate switch near the center on first door to be opened.

A thermostatically controlled heater shall be provided. The heater shall be sized to maintain the enclosure temperature above 32 degrees F during all local weather conditions. The heater shall be a minimum 100 Watt with long life heating element.

A thermostatically controlled vent fan shall be provided. The fan shall be sized to maintain interior temperatures below 100 degrees F in a 90 degree ambient.

An intrusion alarm limit switch shall be provided to activate when the door is opened. The switch shall be located near the center on the first door to be opened.

A second enclosure or an extension to the Electrical Equipment Enclosure (at the manufacturers option), to house the Service Entrance Disconnect and the PSE meter shall be provided. It shall be essentially the same construction as the Electrical Equipment Enclosure and contain a backpan for mounting the disconnect and meter. The enclosure shall be nominally 2' wide, 14" deep and 6' high. The Service Entrance Disconnect and PSE meter enclosure, if a separate enclosure, shall be mounted on the end of the Electrical Equipment Enclosure and secured to it. The joint shall be caulked all around. The door shall be a single door, hinged on the left side. The door shall open 180 degrees and be able to be retained in the open position to allow working access to the enclosed equipment. The door shall have a window made of unbreakable glass to view the meter. The door shall contain padlock features such that a PSE padlock and an owner padlock shall be accommodated, and the opening of either padlock shall allow entrance. The meter enclosure shall contain a light but need not contain a heater or fan. Two louvered ventilation openings shall be provided, one low and one high. The enclosure shall meet the requirements of Puget Sound Energy.

The enclosures shall be as provided by Skyline Electric and Manufacturing Co. of Seattle, WA. No substitute will be accepted. The manufacturer shall make recommendations for securing the enclosures to the concrete slab and shall provide mounting materials and equipment for mounting the enclosures on the concrete slab.

9-38.4(8) Heat Trace Cable

Heat trace shall be self-regulating type 5 watts per foot Chromalox SRF5-ICR with thermostat and power connection box RTBC. Cable shall be terminated using RTEF end seal.

9-38.5 Custom Control Panels.

9-38.5(1) System Integrator

The Custom Control Panels shall be as manufactured by Technical Systems, Inc., 2303 196th St., Lynnwood, WA 98036. Phone (425) 775-5696 Technical Systems, Inc. is the City of Kirkland's System Integrator and sole source supplier for control and telemetry systems. No other manufacturers will be accepted.

9-38.5(2) Design and Assembly

The System Integrator of the custom panels shall be solely and completely responsible for the design and assembly of the entire panels. The panels shall be designed to provide the capabilities and functions indicated and implied by the plans and these specifications and to provide trouble-free operation with minimum maintenance.

All equipment and materials utilized in the panels shall be the products of reputable, experienced manufacturers with at least five (5) years experience in the manufacture of similar equipment. Similar items in the panels shall be the products of the same manufacturer. All equipment shall be of industrial grade and of standard construction, shall be capable of reliable, trouble-free service, and shall be specifically intended for operation and control of pumps and associated equipment. All equipment shall be of modular design to facilitate interchangeability of parts and to assure ease of servicing. All equipment, where practical, shall be of solid state, integrated circuit design.

The custom panels shall be completely assembled in the shop by the System Integrator. All components and equipment shall be pre-wired to the maximum extent possible.

All interconnecting wires installed by the manufacturer shall be numbered at each end using custom pre-printed heat-shrink sleeve markers. Markers shall be T&B SHRINK-KON HVM or approved equal. Terminations shall be made using solderless pressure connectors at all terminations. All conductors shall be stranded wire with thermoplastic insulation and shall be cabled in groups and supported so as to prevent breaking and to present an orderly arrangement and neat appearance. All outgoing wiring shall be terminated on a marked terminal strip capable of connection of at least No.12 wire and all terminal connections shall be numbered consecutively throughout the system.

Control and signal conductors shall be bundled separately from alternating current circuits. All wiring shall be neatly tied in position with nylon cable ties

All wiring and tubing crossing hinges shall be installed in a manner to prevent chafing. Bundles of similar conductors shall be clamped securely to the door and to the panel, and the bundles shall run parallel to the hinge for at least 12 inches. Spiral nylon cable wrap shall be provided in the hinge section of the bundle to fully protect the conductors or tubing against chafing.

9-38.5(3) Interconnecting Wiring

The System Integrator of the custom panels shall determine all requirements for field-installed interconnecting wiring between the panels and all other cabinets, enclosures, sensors, and equipment. The System Integrator shall determine the location, number, size, and type of wires.

The schematic wiring diagrams shown on the plans shall be considered diagrammatic to convey intent of control methodology. The System Integrator shall determine all specific requirements and shall confirm or modify the wiring shown on the plans to conform to such requirements.

9-38.5(4) Enclosure

The enclosures for the custom panels shall be sized as required to accommodate the components indicated on the drawings and specified herein but shall nominally be as follows: The PCP and CP shall be 24”W, 36”H, 12"D. All shall be NEMA 12 single-door, with full mounting panel, padlockable handle and 3-point latch kit. The width of the custom panels is restricted but the vertical dimension is somewhat flexible. If the dimensions indicated are not adequate for the components indicated the System Integrator shall inform the Contractor as to the minimum dimensions required and the Contractor shall require the manufacturer of the Electrical Equipment Enclosure to make dimensional changes as required to house the custom panels along with other items indicated for inclusion in the Electrical Equipment Enclosure. Dimensional requirements shall be determined during the bidding period and all costs associated shall be included in the bid price. No additional costs shall be incurred by the Owner. All dimensional changes shall be submitted to the Engineer for review prior to manufacture.

9-38.5(5) Circuit Breakers

Circuit breakers for disconnecting motor starters and providing branch circuit protection shall be as recommended by the solid state motor starter manufacturer as a combination starter unit. They shall be sized in compliance with the NEC.

9-38.5(6) Soft Start Motor Starters

Soft Start Motor Starters shall be for operation at 480 Volt, 3 Phase. Motor Starters shall be sized to operate the indicated motor at heavy duty rating. Soft Start Motor Starters shall be Schneider Altistart Soft Starter ATS 480 or equal.

9-38.5(7) Pump Overtemp and Moisture Sensing Relays

Pump overtempt and moisture sensing relays shall be Flygt MiniCAS, 14-407129 or equivalent.

9-38.5(8) Programmable Logic Controller

The Programmable Logic Controller shall be Schneider Electric M340 series or later product that is compatible with the City of Kirkland’s wastewater pump stations.

9-38.5(9) Network and Communications

The communications equipment shall be Sierra Wireless Airlink RV55 cellular router and Cisco IE-2000 series managed ethernet switch or as determined by the System Integrator, but shall be compatible with existing communications systems.

9-38.5(10) Operator Interface Terminal

The Operator Interface Terminal (OIT) shall be Maple Systems Smart HMI series, 9.7” display or later version as determined by System Integrator but shall be compatible with existing OIT systems used in the City’s wastewater pump stations

9-38.5(11) Control Relays

Control relays shall be selected by the System Integrator and shall be appropriate for the application.

9-38.5(12) Intrinsically Safe Barrier Relays

Intrinsically safe barrier relays for protection of level float switches shall be IMO GEMS "SAFE-PAK" or equal.

9-38.5(13) Backup Float Control Relay

The backup float control relay shall be Diversified Electronics ARM Series alternating relay with microprocessor-based Integrated Duplex Control and shall contain H-O-A switches for manual backup control. The relay shall be intrinsically safe.

9-38.5(14) Float Controls

The float controls shall be as determined by the System Integrator and shall be in accordance with the City or Kirkland's standard float controls.

9-38.5(15) Intrusion Switches

Intrusion detection switches and key operated enable switch shall be selected by the System Integrator for the appropriate application.

9-38.5(16) Submersible Level Transducer

The submersible level transducer shall be Keller Rat, standard version, 4-20 mA as manufactured by Keller America, Inc. The submersible level transducer may be similar to other transducers used in the Owners wastewater pumping applications.

END OF DIVISION 9

PREVAILING WAGE RATES

City of Kirkland

PREVAILING WAGE RATES

Prevailing wage rates can be found at:
www.lni.wa.gov/tradeslicensing/prevwage/wagerates

Bid Date – September 23, 2025

King County

A copy of the applicable wage rates is available for viewing in our office:

City Hall Annex
310 1st Street
Kirkland, WA 98033

The City of Kirkland will mail a hard copy of the applicable wage rates upon request.
Send your request to the Project Engineer.

APPENDIX A

PLANS

City of Kirkland

Appendix A

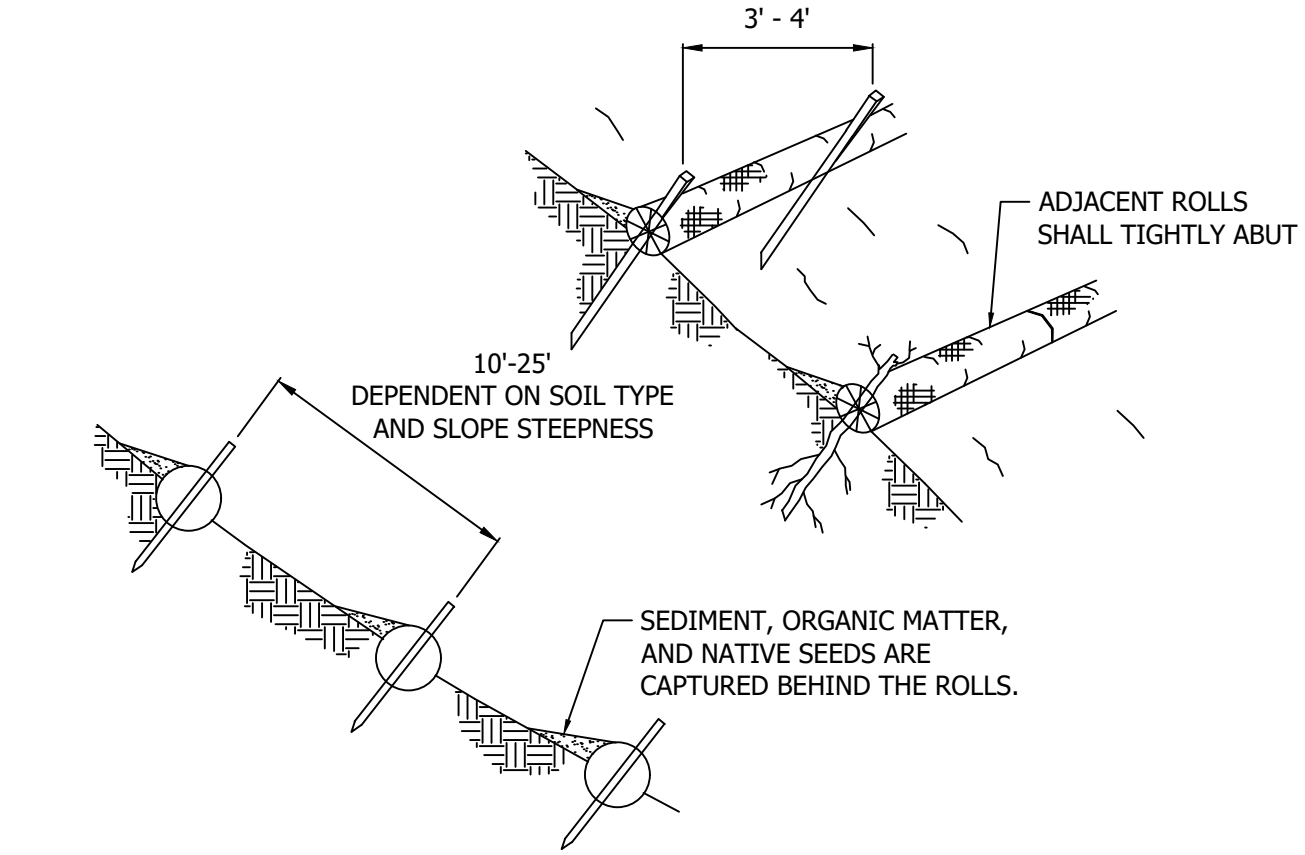
N/A	Cover, Vicinity Map, City Officials, Personnel Contact List, and Sheet Index
C1	General Notes, Abbreviations, Plan Symbols, and Callouts
C2	Existing Conditions, Legend and Survey Notes
C3	Demolition and Final Overlay Site Plan
C4	Existing Wet Well and Dry Well Selective Demolition
C5	Site and Surfacing Plans
C6	Wet Well and Valve Vault
C7	Details
L1	Landscaping Site Plans
L2	Landscaping Notes and Details
S1	City of Kirkland Davit Crane Anchorage
E1	Electrical Site Plan, Legend, and Abbreviations
E2	Electrical Enlarged Site Plan
E3	Electrical Elevation and Details
E4	Electrical Equipment Enclosure
E5	Electrical One Line Diagram and Schedules
E6	Electrical Pump Control Panels and Control Panels Layout
E7	Electrical PLC Connections
E8	Electrical Control Panel Schematic Wiring Diagram
T1	TESC and Pollution Prevention Notes
T2	TESC Site Plan

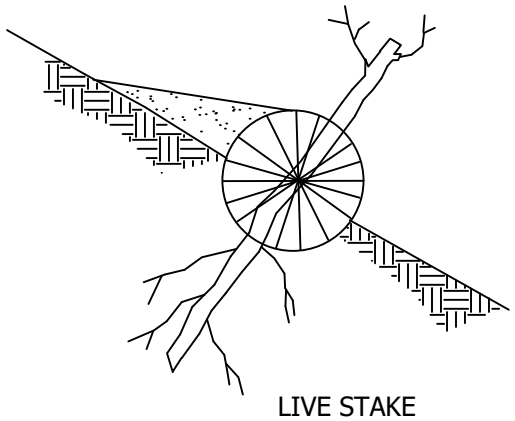
APPENDIX B

PRE-APPROVED PLANS

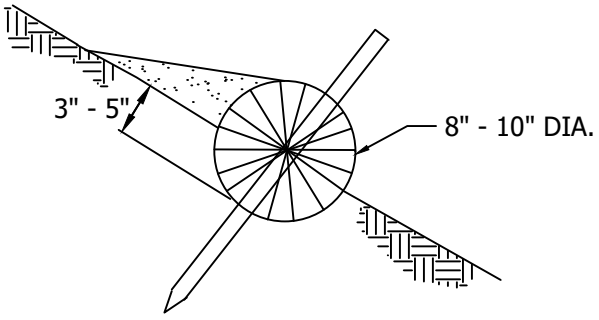
City of Kirkland

LAST REVISED: 01/2022





LIVE STAKE



1"x1" STAKE

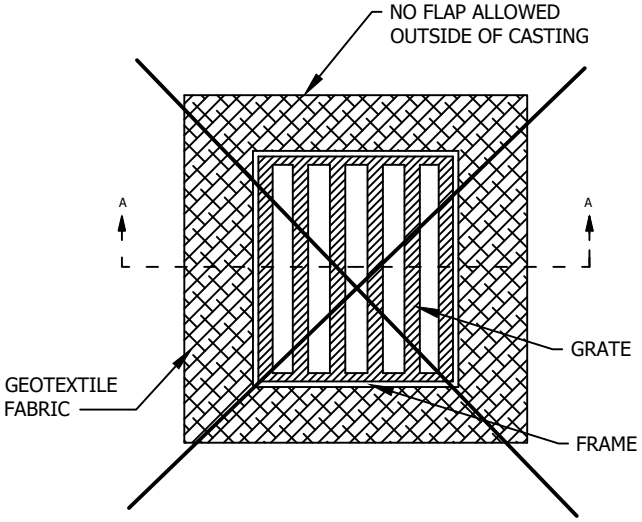
NOTES

1. STRAW ROLLS SHALL BE PLACED ALONG SLOPE CONTOURS.
2. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
3. DRIVE STAKE THROUGH MIDDLE OF WATTLE, LEAVING 2"-3" OF STAKE PROTRUDING ABOVE WATTLE.

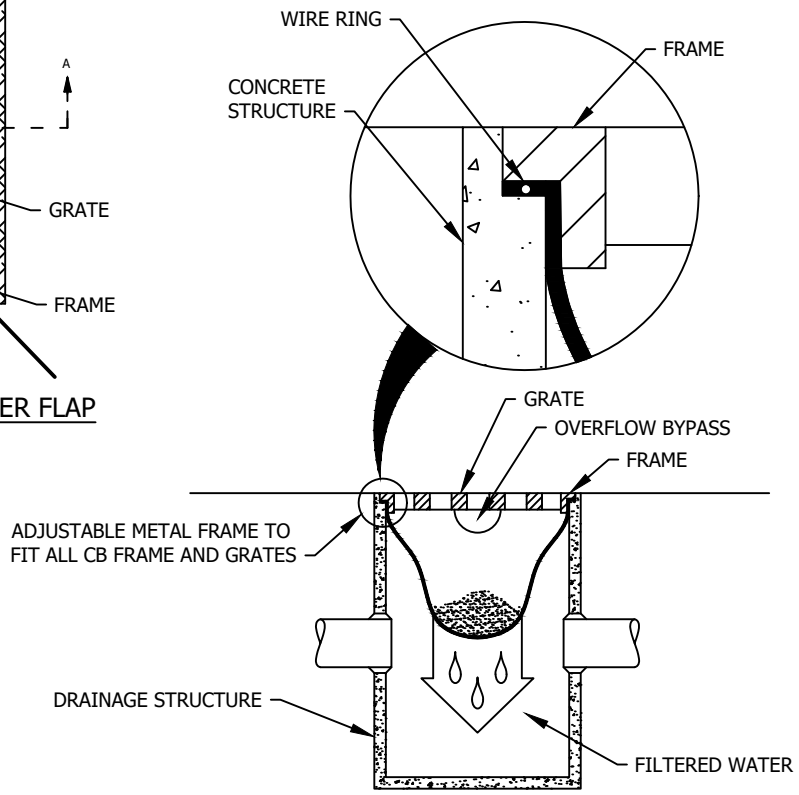
NOT TO SCALE

CITY OF KIRKLAND	
PLAN NO. CK - E.10	
CITY OF KIRKLAND WASHINGTON	STRAW WATTLES

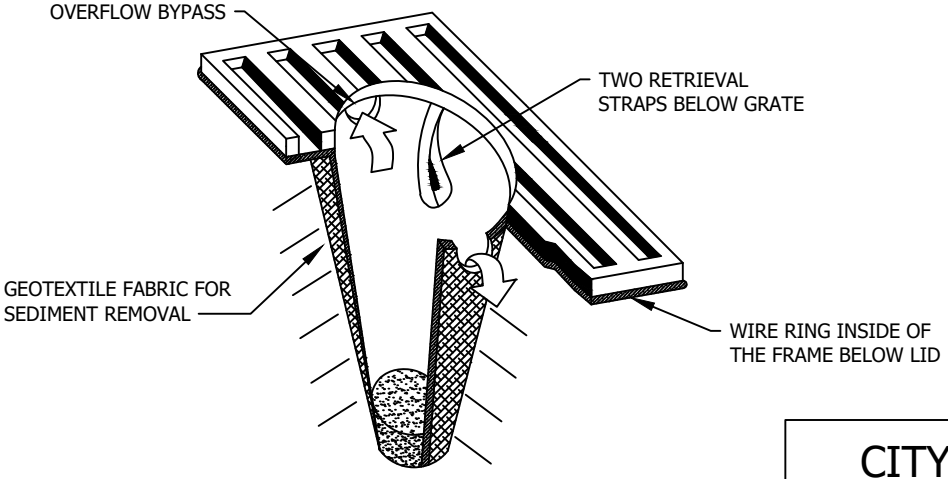
LAST REVISED: 01/2020



PROTECTION INSERSET WITH OUTER FLAP
(NOT ALLOWED)



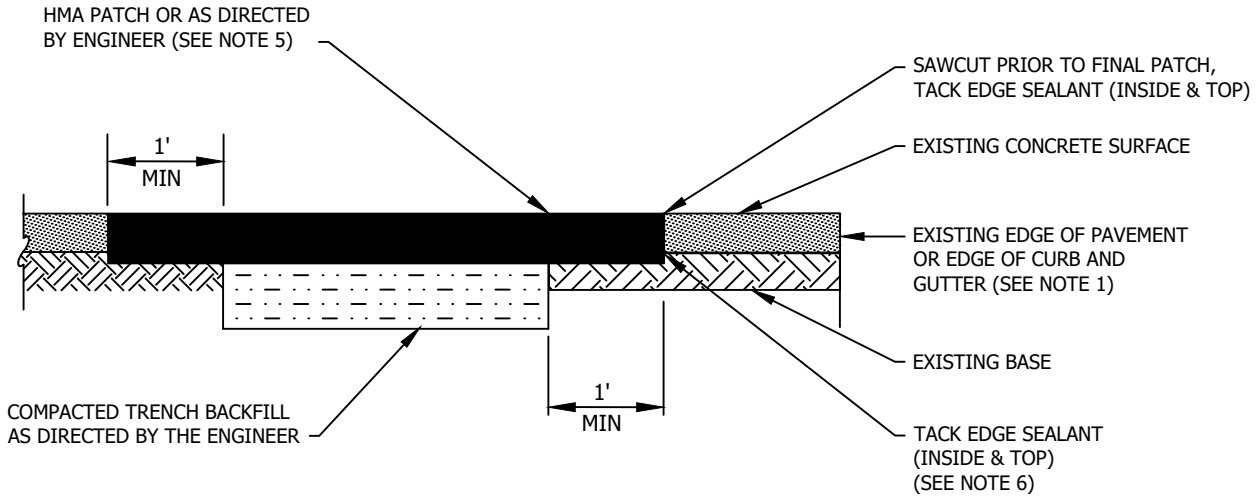
STORM DRAIN PROTECTION
INSERT SECTION A-A



STORM DRAIN PROTECTION INSERT
ISOMETRIC VIEW (TYP.)

CITY OF KIRKLAND	
PLAN NO. CK- E.11	
CITY OF KIRKLAND WASHINGTON	STORM DRAIN PROTECTION INSERT

LAST REVISED: 01/2020

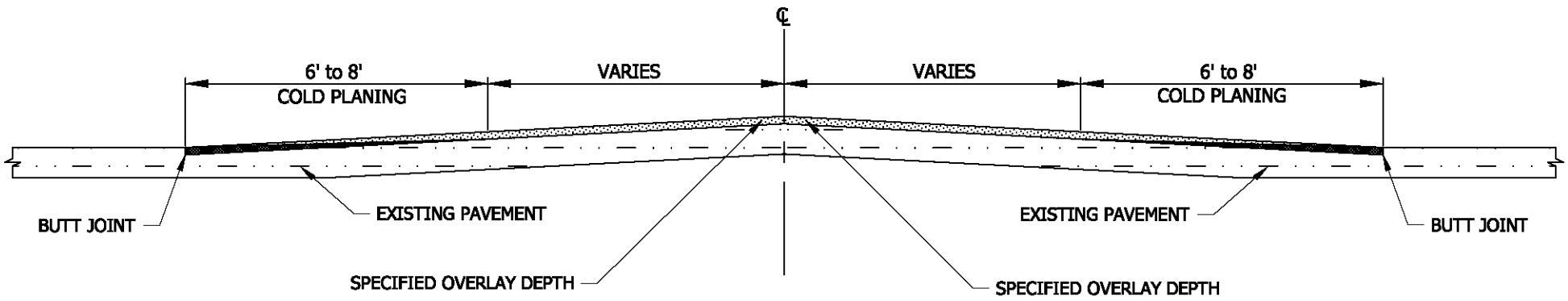


TYPICAL PATCH FOR PAVEMENT

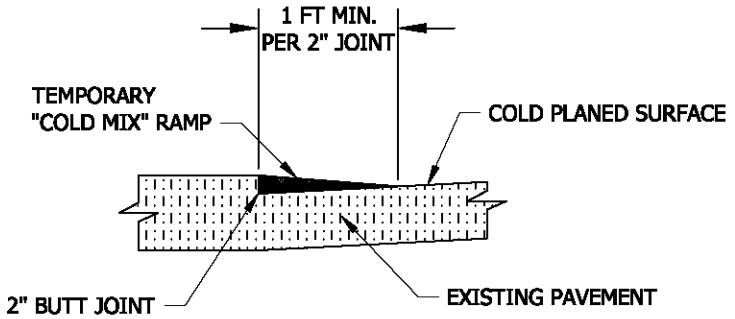
NOTES:

1. IF THE DISTANCE FROM THE EDGE OF PATCH TO THE EDGE OF PAVEMENT OR CURB AND GUTTER IS LESS THAN 3', THE PATCH MUST CONTINUE TO THE EXISTING EDGE; UNLESS ROADWAY IS OVERLAID WITHIN 60 DAYS.
2. HOT MIX ASPHALT SHALL BE CLASS 1/2".
3. ALL TRENCH BACKFILL SHALL BE CRUSHED SURFACING TOP COURSE MATERIAL FOR PERPENDICULAR TRENCHES, OR AS DIRECTED BY ENGINEER.
4. HMA CLASS 1/2" MAY BE USED IN LIEU OF ATB.
5. PATCH MUST ALWAYS BE 1" DEEPER THAN EXISTING ASPHALT; MAX 6" DEEP, OR AS DIRECTED BY ENGINEER.
6. TOP SEAL-USE PG 64-22 AND PROVIDE A SAND BLANKET TO ALLEVIATE TRAILING.
7. REFER TO COK STD. PLAN NO. CK-R.13C FOR REQUIREMENTS FOR GEOTECH BORING ASPHALT PATCHES.

CITY OF KIRKLAND	
PLAN NO. CK- R.12	
CITY OF KIRKLAND WASHINGTON	RESTORATION DETAIL AND PAVEMENT PATCHING



BUTT JOINT COLD PLANING



"COLD MIX" RAMP

NOTES:

1. ALL JOINTS PLANED PERPENDICULAR TO TRAVEL LANES SHALL BE IMMEDIATELY PAPER JOINTED, COLD MIXED, AS PER THIS DETAIL, AND MAINTAINED UNTIL NEW HMA LAYER IS INSTALLED. PAPER JOINTS WILL BE REMOVED JUST PRIOR TO PLACEMENT OF WEARING COURSE.

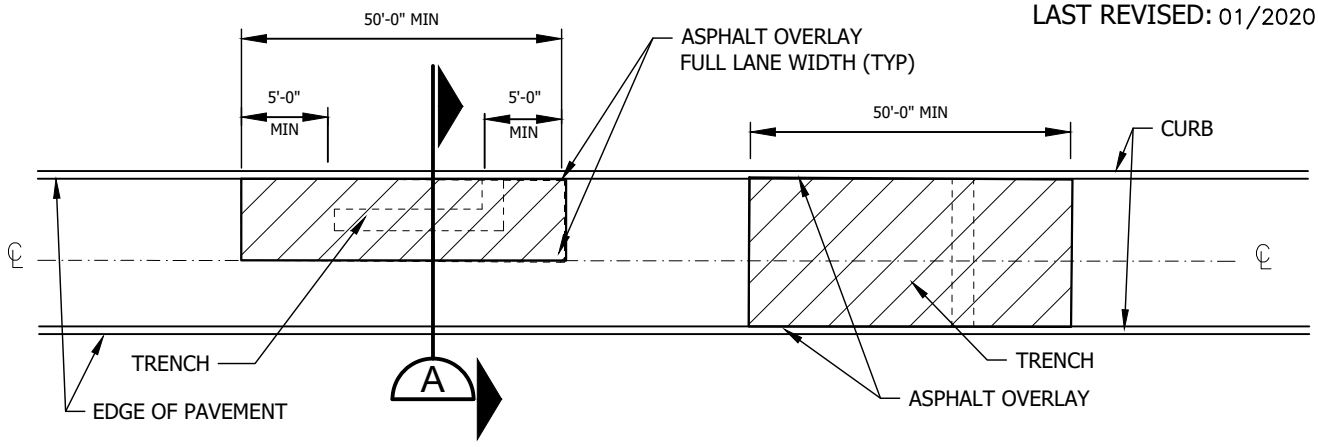
CITY OF KIRKLAND

PLAN NO. CK-R.13

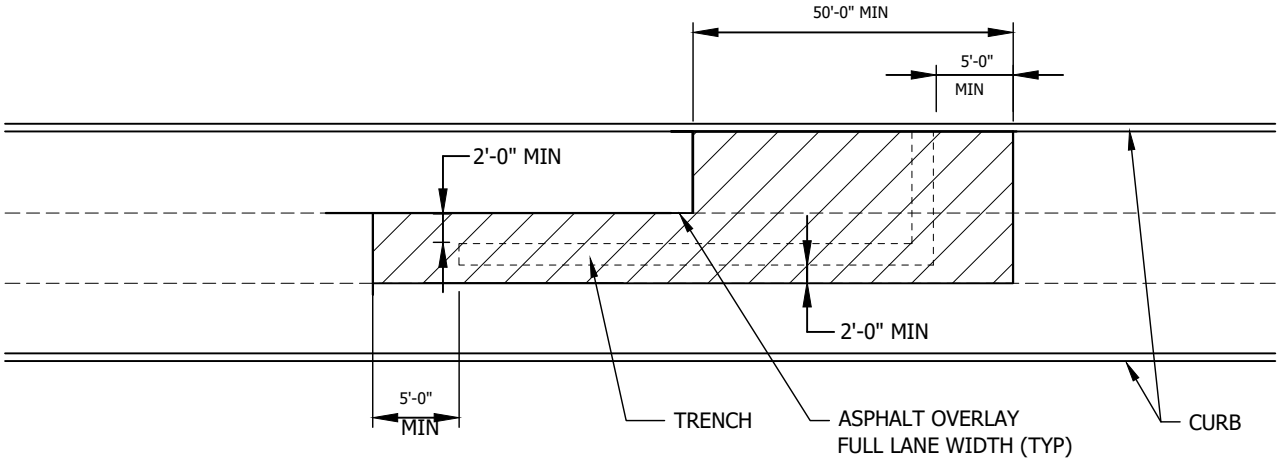
BUTT JOINT, COLD PLANING AND COLD MIX RAMP

LAST REVISED:1/2019

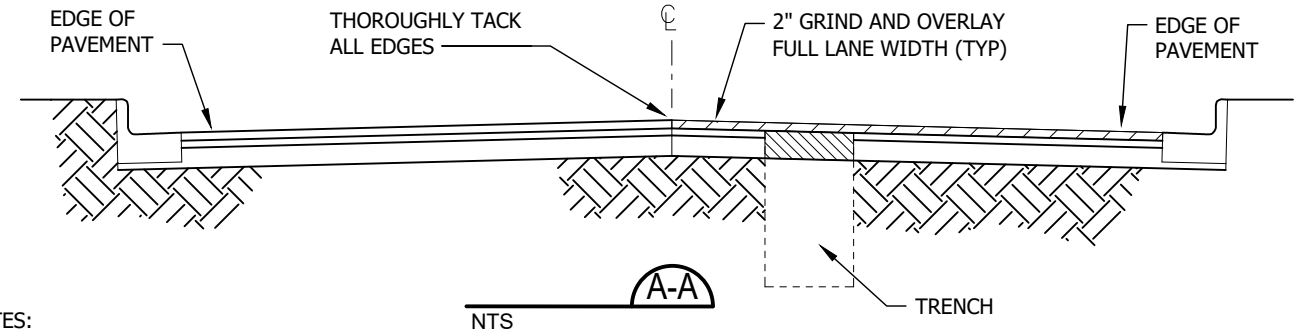
LAST REVISED: 01/2020



PLAN VIEW
NTS



PLAN VIEW
NTS



NTS

NOTES:

1. THIS STANDARD APPLIES TO ALL CUTS AND ARTERIAL STREETS AND ALL PAVEMENT LESS THAN 5 YEARS OLD.

2. OVERLAY AREA MAY BE MODIFIED BY CITY ON OLDER PAVEMENT DEPENDING ON CONDITIONS OR SCHEDULED CONSTRUCTION/MAINTENANCE.

3. ADJUST ALL UTILITY CASTING TO FINISH GRADE AND RESTORE CHANNELIZATION AND LOOP DETECTORS.

4. POTHOLES TO BE RESTORED WITH A 1' T-CUT. IF AFTER THE 1' T-CUT THE PATCH IS MORE THAN 4'x4', A GRIND AND OVERLAY IS REQUIRED UNLESS OTHERWISE APPROVED BY PUBLIC WORKS. IF THE PATCH IS WITHIN 2 LANES OF TRAVEL, THE GRIND AND OVERLAY WILL BE REQUIRED ON BOTH LANES. 50' MIN. LENGTH.

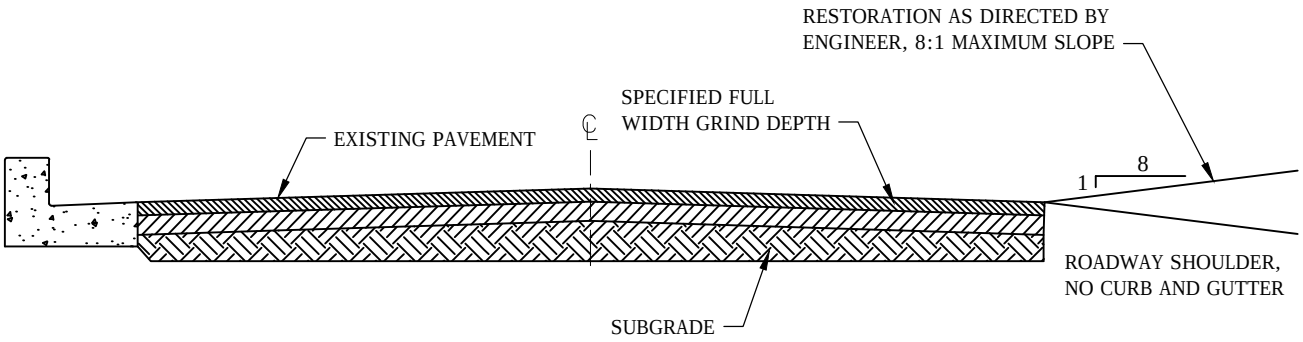
5. REFER TO COK STD. PLAN NO. CK-R.13C FOR REQUIREMENTS FOR GEOTECH BORING ASPHALT PATCHES.

CITY OF KIRKLAND

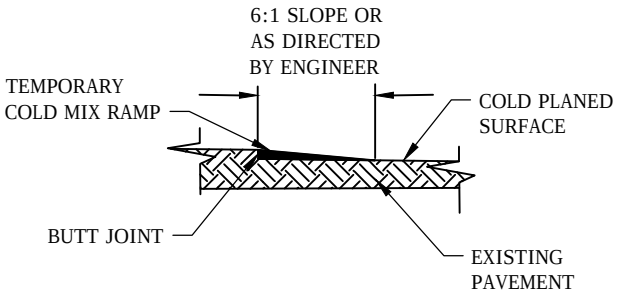
PLAN NO. CK- R.13A

CITY OF KIRKLAND WASHINGTON

ASPHALT OVERLAY FOR ROADWAY TRENCH REPAIR



FULL WIDTH COLD PLANING DETAIL



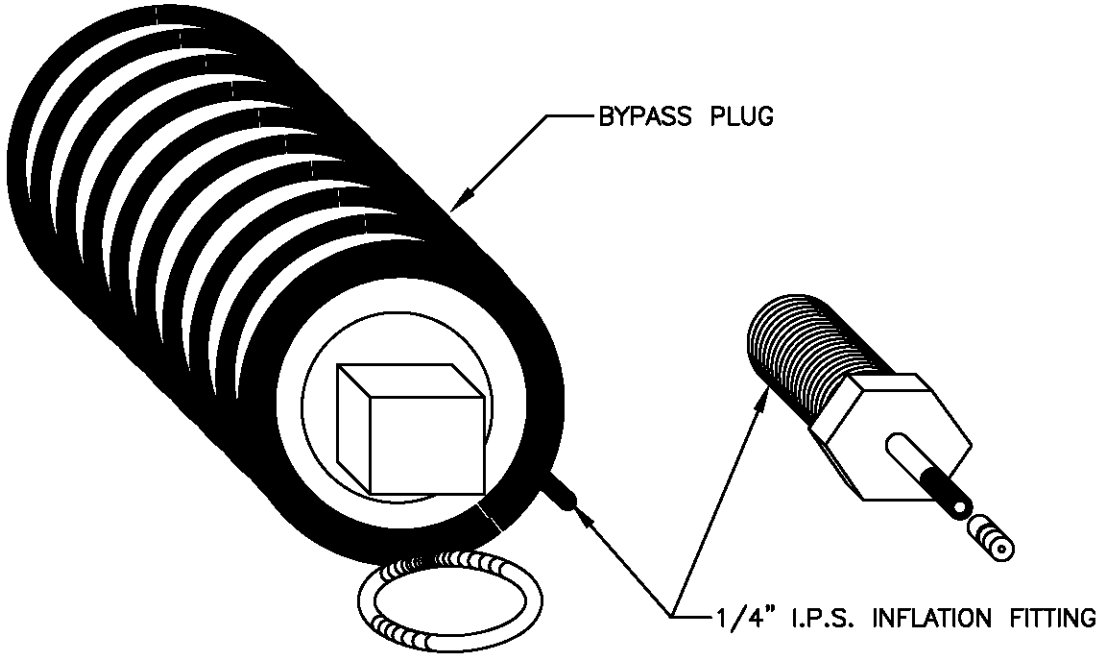
COLD MIX RAMP

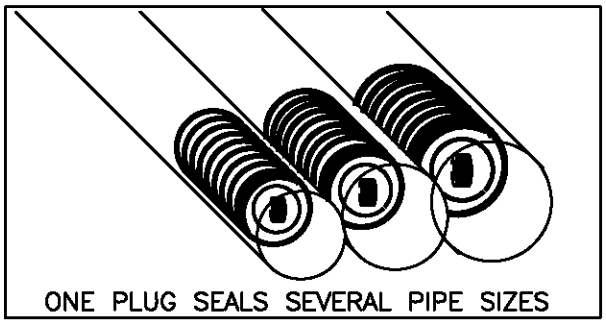
NOTES:

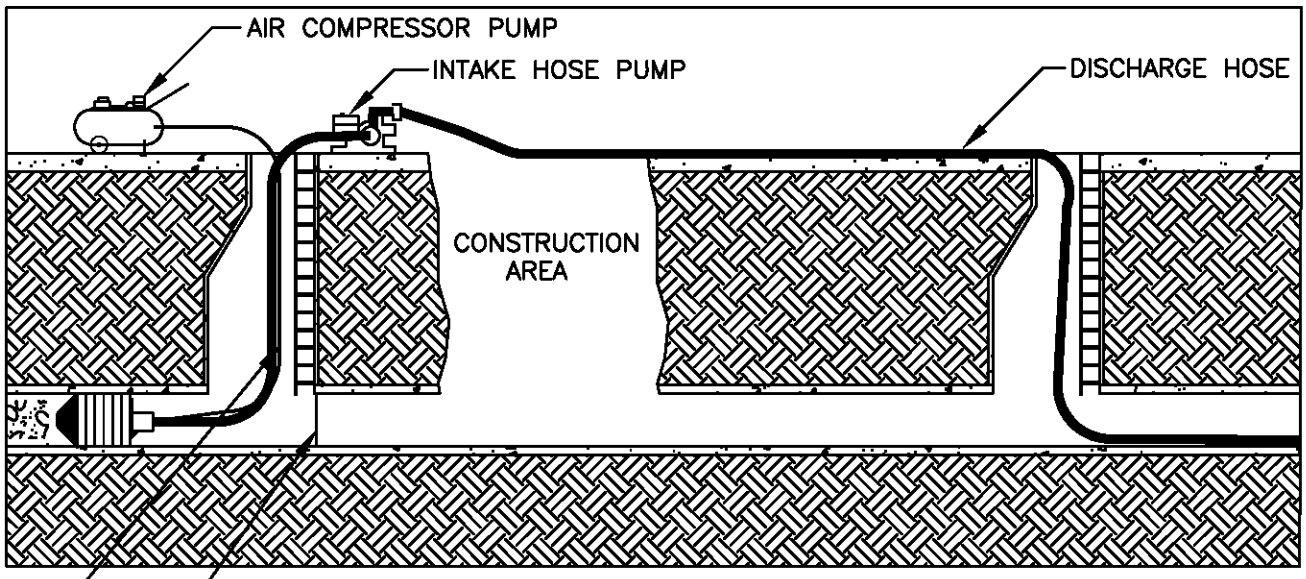
ALL JOINTS PLANED PERPENDICULAR TO TRAVEL LANES SHALL BE IMMEDIATELY PAPER JOINTED, COLD MIXED, AS PER THIS DETAIL, AND MAINTAINED UNTIL HMA LAYER IS INSTALLED. PAPER JOINTS WILL BE REMOVED JUST PRIOR TO PLACEMENT OF WEARING COURSES.

CITY OF KIRKLAND	
PLAN NO. CK- R.13B	
CITY OF KIRKLAND WASHINGTON	FULL WIDTH COLD PLANING DETAIL

LAST REVISED: 11/30/99







INFLATION HOSE

SCREEN MUST BE INSTALLED, TO PREVENT DEBRIS FROM ENTERING MAIN, BEFORE MANHOLE CAN BE SERVICED

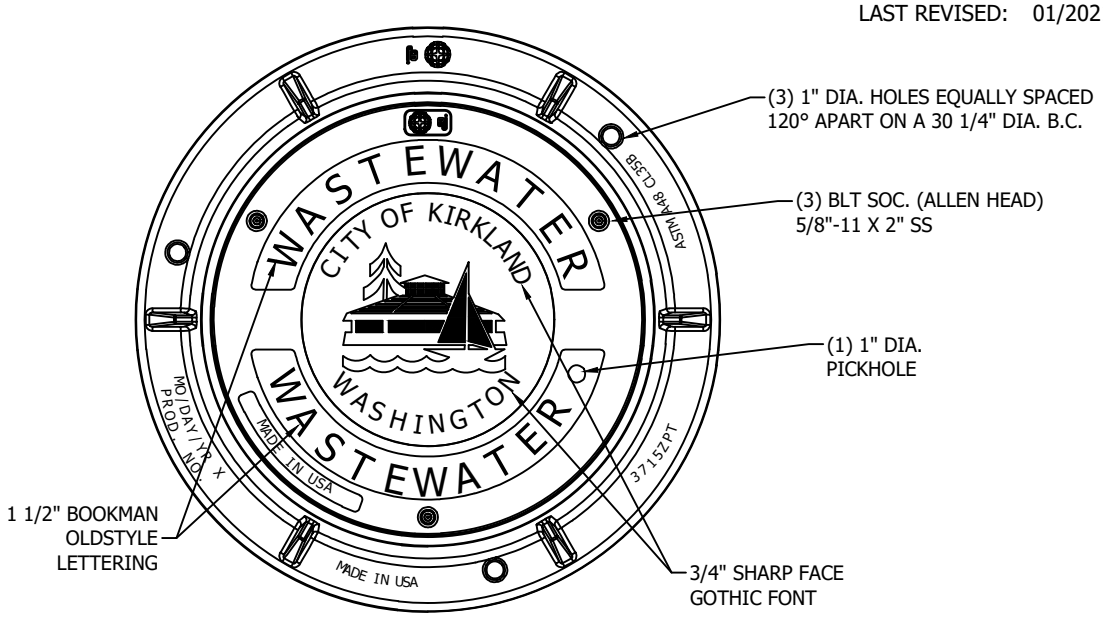
CITY OF KIRKLAND

PLAN NO. CK–S.08

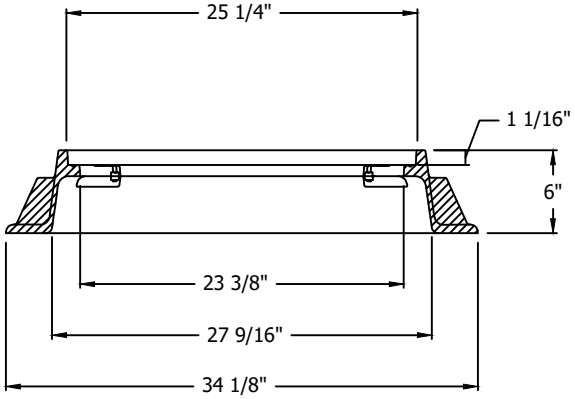
CITY OF KIRKLAND WASHINGTON

SEWER MAIN BYPASS PLUG

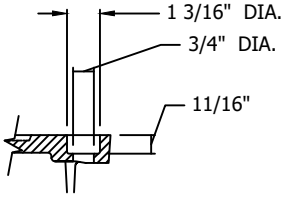
LAST REVISED: 01/2021



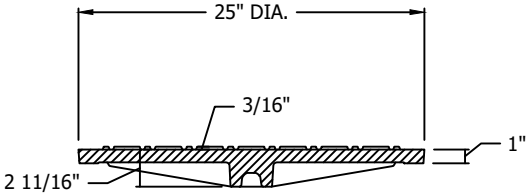
PLAN VIEW



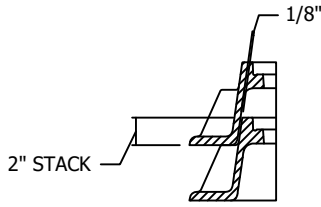
FRAME SECTION



BOLTHOLE DETAIL



COVER SECTION



STACKING DETAIL

NOTES:

1. VERIFY SLOTTED FRAMES ARE THOROUGHLY FILLED IN WITH MORTAR FOR EFFICIENT INTERACTION WITH IRON AND STRUCTURE.
2. REQUIRED ON ALL ARTERIALS, COLLECTORS OR ANY TIME THAT THE IRON WILL BE WITHIN THE TRAVEL LANE.
3. LID SHALL BE MARKED "WASTEWATER".
4. CITY OF KIRKLAND LOGO REQUIRED.
5. LID MUST BE COVERED WITH TAR PAPER BEFORE OVERLAY.
6. USE WITH THREE LOCKING BOLTS 5/8"-11 BOLT SOCKET (ALLEN HEAD), 2" LONG DRILL HOLES SPACED 120° APART ON 23-1/16" DIA. B.C.
7. COVER MATERIAL IS DUCTILE IRON ASTM A48 CL35B, WITH A MINIMUM WEIGHT OF 141 LBS.
8. FRAME MATERIAL IS DUCTILE IRON ASTM A48 CL35B, WITH A MINIMUM WEIGHT OF 134 LBS.
9. DRILL AND TAP THREE 5/8"-11 NC HOLES THROUGH RING AT 120° AND 23-1/16" DIA. B.C.
10. PRODUCT SUPPLIED BY EJ, OR APPROVED EQUAL.
11. FRAME AND COVER SHALL BE H-20 LOADING RATED IF INSTALLED IN ROADWAY.

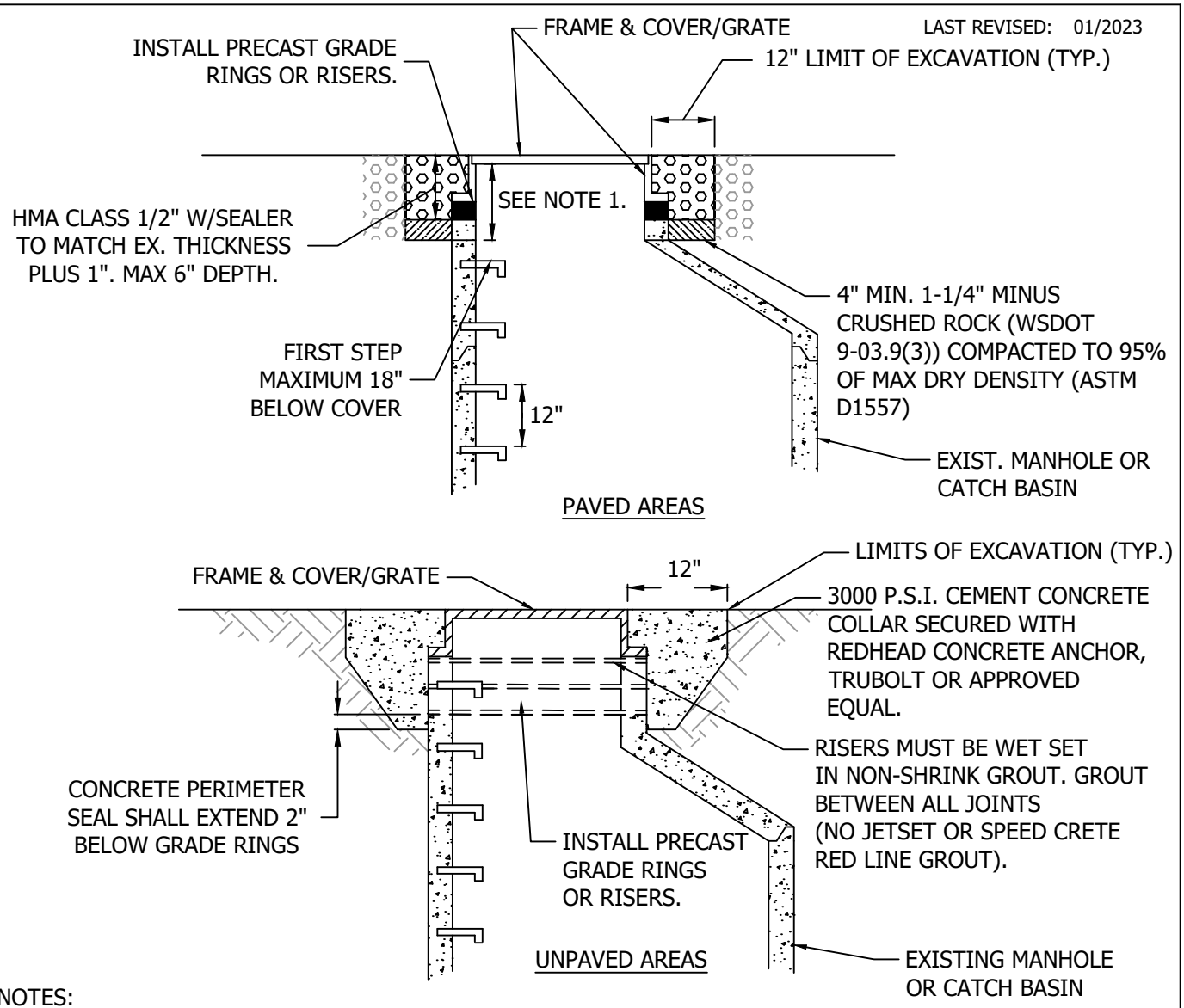
CITY OF KIRKLAND

PLAN NO. CK - S.16

CITY OF KIRKLAND WASHINGTON

24" MANHOLE FRAME W/LOCKING COVER AND LOGO

LAST REVISED: 01/2023



NOTES:

1. WHERE DEPTH OF NECK EXCEEDS 18 INCHES (INCLUDING FRAME AND COVER), ADJUST MANHOLE/CATCH BASIN TO GRADE BY INSERTING NEW BARREL SECTION BETWEEN THE CONE/SLAB AND EXISTING BARREL.

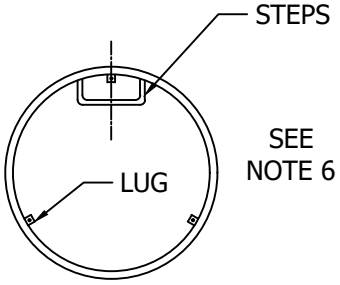
2. GRADE RINGS, RISERS AND FRAME SHALL BE SET IN 3/4" NON-SHRINK GROUT, GROUT BETWEEN ALL JOINTS. ALL SURFACES MUST BE CLEAN OF DEBRIS AND DIRT, AND WETTED PRIOR TO GROUTING. GROUT SMOOTH INSIDE AND OUTSIDE SURFACES PRIOR TO BACKFILL.

3. STEPS OR HAND HOLDS SHALL BE ADDED PER ASTM C478.

4. PRECAST GRADE RINGS AND RISERS MUST BE CAST WITH GROOVE TO ALLOW FIELD INSTALLATION OF SAFETY STEP WHEN RISER IS 4" OR HIGHER.

5. REPLACE EXISTING FRAME AND COVER/GRATE IF NOT MEETING CURRENT SPECIFICATIONS.

6. IF REQUIRED: LOCKING MH SHALL BE POSITIONED WITH ONE LUG CENTERED OVER STEPS, UNLESS USING CK-S.16A CASTING.



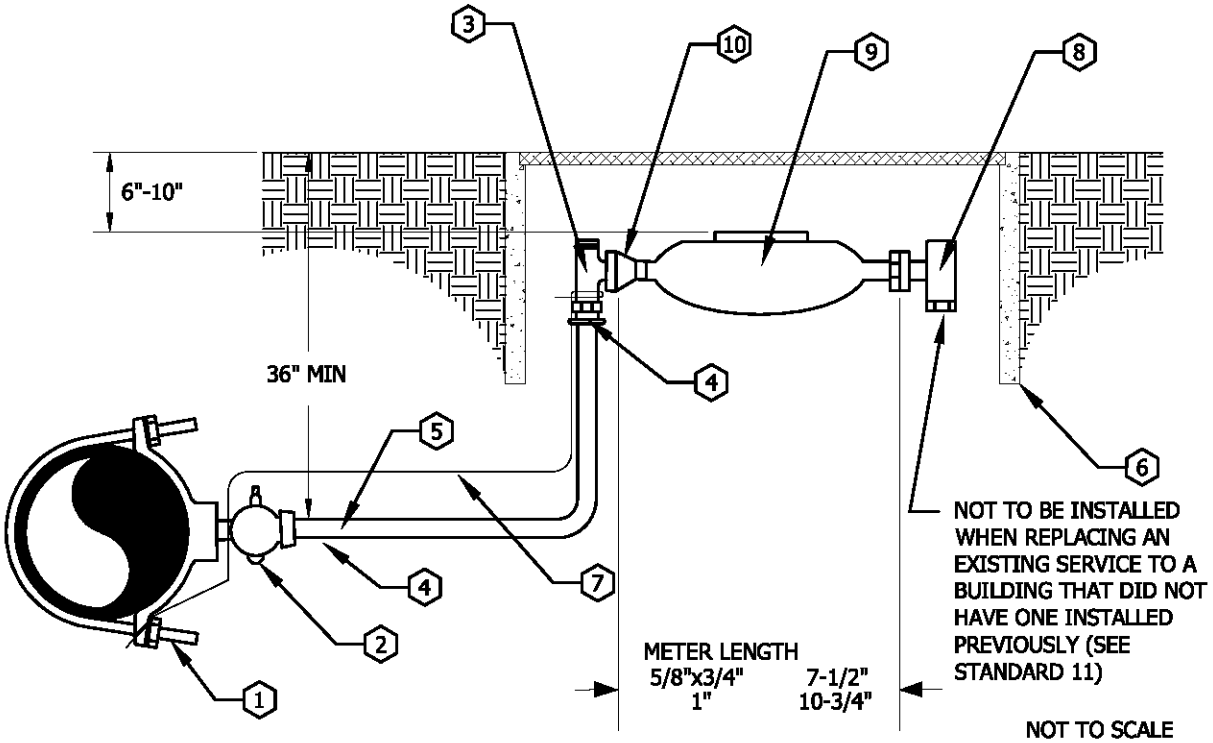
LOCKING MH FRAME
PLAN VIEW

CITY OF KIRKLAND

PLAN NO. CK - S.26

MANHOLE FRAME AND GRATE ADJUSTMENT

LAST REVISED:10/15/19



WATER SERVICE STANDARDS

DESCRIPTION	MAKER OR TYPE	1"
1. SINGLE STRAP SADDLE	STAINLESS ROMAC OR EQUAL	101 1PT
2. CORP STOP	FORD OR EQUAL	FB1101-4-G-NL
3. ANGLE STOP	FORD OR EQUAL	BA63-444W-G-NL
4. INSERTS	FORD OR EQUAL	#72 STAINLESS STEEL
5. POLY PIPE	POLYETHYLENE ASTM D2239	IPS-SDR-7(PE3408)
6. METER BOX	CARSON OR EQUAL	CK-W.21 (OR W.23 W/APPROVAL)
7. TRACER WIRE	CU SOLID WIRE	14 GAUGE
8. CHECK VALVE	---------	CITY TO INSTALL*
9. METER	---------	CITY TO INSTALL*
10. 1" x 3/4" METER ADAPTOR (FOR 5/8 x 3/4" MTR)	FORD OR EQUAL #A24	CITY TO INSTALL UNLESS A CIP PROJECT
11. 1" METER	FORD OR EQUAL L31-44	CONTRACTOR TO INSTALL
3/4" METER	FORD OR EQUAL L31-24	

*UNLESS A CIP PROJECT

NOTES:
1. ALL FITTINGS MUST BE FORD OR EQUAL.
2. TRACER WIRE FROM MAIN TO SERVICE METER MUST BE INSTALLED IN ALL INSTALLATIONS. WIRE MUST BE WRAPPED AROUND ANGLE STOP AND THE CORPORATION STOP, WITH LAST 8" STRIPPED.
3. POLY SERVICE LINE IS TO BE CONTINUOUS FROM MAIN TO METER-NO SPLICES OF ANY KIND.
4. POLY PIPE TO BE 1" FROM MAIN TO METER.
5. METERS SHALL NOT BE LOCATED IN CONCRETE OR ASPHALT PAVING UNLESS UNAVOIDABLE.
6. THE ANGLE STOP SHALL BE IN A POSITION THAT RESULTS IN THE METER BEING CENTERED DIRECTLY BENEATH THE METER READING LID.

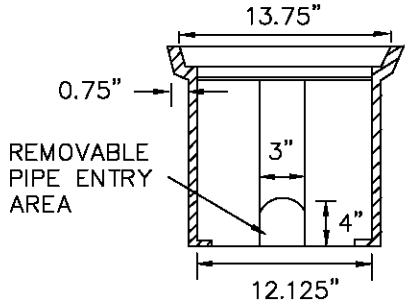
CITY OF KIRKLAND

PLAN NO. CK– W.18

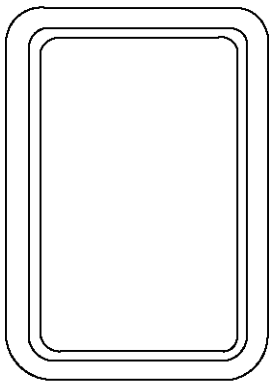
CITY OF KIRKLAND WASHINGTON

5/8"x3/4" & 1" WATER METER SERVICE INSTALLATION

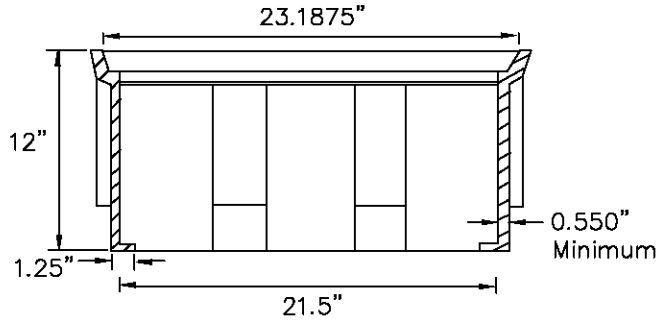
LAST REVISED:02/01/10



SHORT SIDE VIEW



TOP VIEW



LONG SIDE VIEW

NOTE:

MID–STATES PLASTICS, INC. PART NUMBER MSBCF 1324–12 (or equal).

The Meter Box shall be high–density polyethylene of one–piece molded construction for durability and impact strength, and with a ductile iron cover (with flip–up meter reading window) installed shall be able to bear a 20,000lb load in a wheel load; and shall have a wall thickness of no less than 0.550". The Meter Box shall be black on the exterior to prevent UV degredation, and bright white on the interior to reflect light and ease meter reading service.

CITY OF KIRKLAND	
PLAN NO. CK– W.23	
CITY OF KIRKLAND WASHINGTON	3/4" AND 1" WATER METER TRAVEL BOX

APPENDIX C

PERMITS (NOT APPLICABLE)

City of Kirkland

APPENDIX D

GEOTECHNICAL REPORT

City of Kirkland

DRAFT GEOTECHNICAL REPORT
Trend Lift Station
Kirkland, Washington

HWA Project No. 2021-143-21

Prepared for
David Evans & Associates, Inc.

May 3, 2022

HWA GeoSciences Inc.
DBE/MWBE

Geotechnical Engineering
Pavement Engineering
Geoenvironmental
Hydrogeology
Inspection & Testing

HWA GeoSciences Inc.
DBE/MWBE

May 3, 2022
HWA Project No. 2021-143-21

David Evans & Associates Inc.
14432 SE Eastgate Way, Suite 400
Bellevue WA 98007

Attention: Rodney Langer, P.E.

Subject: **DRAFT GEOTECHNICAL REPORT**
Trend Lift Station
Kirkland, Washington

Dear Rodney:

We are pleased to present this draft geotechnical report for the proposed improvements to Trend Lift Station at NE 112th Street and 132nd Avenue NE in Kirkland, Washington. The purpose of this study was to evaluate the soil and ground water conditions for potential wet well replacement and provide geotechnical recommendations in support of the proposed improvements.

We appreciate the opportunity to provide geotechnical engineering services on this project. If you have any questions regarding this report or require additional information or services, please contact us at your convenience.

Sincerely,

HWA GeoSciences Inc.

Ralph N. Boirum, P.E.

Geotechnical Engineer, Principal

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Appendices

Appendix A: Field Exploration

Appendix B: Laboratory Program

DRAFT GEOTECHNICAL REPORT
TREND LIFT STATION
KIRKLAND, WASHINGTON

1.0 INTRODUCTION

1.1 GENERAL

This report presents the results of geotechnical engineering studies performed by HWA GeoSciences Inc. (HWA) in support of the Trend Lift Station Improvement project in Kirkland, Washington. The purpose of this study was to evaluate the soil and ground water conditions in the vicinity of the existing lift station and provide geotechnical recommendations for design and construction of the lift station improvements.

Our work for this project included performing a site reconnaissance, conducting a subsurface investigation, performing geotechnical engineering analyses, and providing recommendations for the geotechnical aspects of design. The field work included drilling one exploratory boring and installing a monitoring well, and subsequently checking for groundwater in the well.

Appropriate laboratory tests were conducted on selected soil samples to determine relevant engineering properties of the subsurface soils. In this report, we present a summary of the soil and ground water conditions observed, as well as geotechnical design and construction recommendations for the proposed improvements.

1.2 PROJECT DESCRIPTION

We understand that the City of Kirkland (City) plans to upgrade the existing lift station. The project will include upgrading the station, which may be an entire replacement. The existing wet well/dry well configuration will be replaced with a station in a submersible configuration. We understand the wet well may be able to be reused; however, the current one may be too shallow for the replacement pump configuration, and a new wet well may be required. The new wet well would be about 5 feet deeper than the existing well, at approximately 25 feet deep. It would be located near the existing structure.

The project location is shown on the Vicinity Map, Figure 1.

2. FIELD AND LABORATORY TESTING

2.1 GEOTECHNICAL INVESTIGATION

Our exploration program included a surface reconnaissance of the vicinity and drilling one exploratory boring, as described below. The approximate location of the boring is shown on the

Site and Exploration plan, Figure 2. The log of the boring is presented in Appendix A of this report.

The boring was designated BH-1, and was drilled on April 8, 2022, to a depth of 51 feet. It was located within the westbound lane of NE 112th Street, due north of the existing lift station. The drilling was performed by Advance Drill Technologies, Inc. of Snohomish, Washington, under subcontract to HWA. A Diedrich D50 rubber-tracked drill rig equipped with hollow stem auger was used.

Standard Penetration Testing (SPT) was performed in the borehole using a 2-inch outside diameter, split-spoon sampler driven by a 140-pound automatic drop hammer. During the test, samples were obtained by driving the sampler up to 18 inches into the soil with the hammer free-falling 30 inches. The number of blows required for each 6 inches of sampler penetration was recorded. The N-value (or resistance in terms of blows per foot) was defined as the number of blows recorded to drive the sampler the final 12 inches. If a total of 50 blows was recorded within a single 6-inch interval, the test was terminated, and the blow count was recorded as 50 blows for the number of inches of penetration achieved. This resistance, or N-value, provides an indication of the relative density of granular soils and the relative consistency of cohesive soils.

Soil samples were obtained in the boring at approximate 2½-foot intervals to a depth of 20 feet, then at 5-foot intervals to the bottom of the boring.

After completion of drilling, a 2-inch diameter PVC monitoring well was installed in the boring in accordance with Department of Ecology regulations.

The boring was completed under the full-time observation of a geotechnical engineer from HWA, who collected pertinent information including soil sample depths, stratigraphy, soil engineering characteristics, and ground water occurrence as the exploration was advanced. Soils were classified in general accordance with the classification system described on Figure A-1, which also provides a key to the exploration log symbols. The exploration log is presented on Figure A-2.

The stratigraphic contacts shown on the borehole log represent the approximate boundaries between soil types. Actual transitions may be more gradual. The soil and ground water conditions depicted are only for the specific dates and location reported, and therefore, are not necessarily representative of other locations and times.

2.2 LABORATORY TESTING

Laboratory tests were conducted on selected samples retrieved from the explorations to characterize relevant engineering properties and index parameters of the soils encountered at the

site. The tests included visual classification, natural moisture content determination, grain size distribution analysis, and pH and resistivity tests. The tests were conducted in the HWA laboratory in general accordance with appropriate American Society of Testing and Materials (ASTM) standards and are discussed in further detail in Appendix B. The test results are presented in Appendix B, and/or displayed on the exploration log in Appendix A, as appropriate.

3. SITE CONDITIONS

3.1 GENERAL

The existing lift station is at the southwest corner of the intersection of NE 112th Street and 132nd Avenue NE, near the eastern city limits of Kirkland, Washington. The site is in a residential neighborhood on a broad plateau. The plateau generally extends approximately 700 feet east of 132nd Avenue where the ground slopes steeply down about 300 vertical feet to the Sammamish Valley floor. Closer to the site, two head ends of a large ravine cut into the hillside and are located adjacent to 132nd Avenue a short distance to the north and south of 112th Street. The ravine likely drains the area, lowering the ground water level in the vicinity of the lift station.

3.2 GENERAL GEOLOGIC CONDITIONS

Specific geologic information for the project area was obtained from the geologic map entitled Geologic Map of the Kirkland Quadrangle, Washington (Minard, 1983). According to this map, near-surface deposits in the vicinity consist of glacial till over glacial advance outwash. At the project site, the top of the advance outwash is mapped high up on the eastern slope, such that the till forms a thin veneer. Our subsurface exploration did not encounter glacial till.

Glacial ice known as the Puget Lobe of the Cordilleran Ice Sheet advanced southward from present British Columbia during the latest continental glaciation at the end of the Pleistocene, depositing glacial meltwater deposits during ice advances and recessions as well as lodgment till directly beneath the ice. The advance outwash consists of a well-sorted, finely to broadly bedded sands with varying amounts of silt. Pebble gravel is often found towards the top of this geologic unit. The advance outwash was deposited by meltwater directly in front of the glacier, as a deltaic fan into a broad proglacial lake. The glacier then overrode the advance outwash, depositing glacial till as a deforming bed of sediment. The till consists of a poorly sorted, non-stratified mixture of clay, silt, sand, and gravel with scattered cobbles and boulders. The weight of over 3,000 feet of ice in this vicinity compacted the till and underlying layers to an overconsolidated, very dense or hard condition.

3.3 SUBSURFACE CONDITIONS

The results of our subsurface explorations indicate that the proposed lift station improvements are underlain by glacially over-consolidated advance outwash, with surficial deposits of glacial recessional outwash in the upper 15 feet. The soil units encountered are described in more detail as follows:

- **Recessional Outwash:** Medium dense to very dense sand with variable silt content was encountered in the boring, with dense soils beginning at approximately 15 feet.
- **Advance Outwash:** Dense to very dense sand with variable silt content was encountered in the boring below approximately 15 feet to the bottom of the boring at a depth of 51 feet.

3.4 GROUND WATER

Although the sands were generally moist, ground water was not observed during drilling, nor during installation of the well. Water was not present in the monitoring well (depth ~49.6 feet) on April 21, 2022. We expect that the ground water will vary seasonally with the highest potential levels in the wet winter months and the lowest levels in the dry summer months. It is likely that ground water drains to the ravine east of the site and is not likely to be encountered during construction of a new wet well at the site. However, perched ground water could be present within sandier soil above layers of less permeable soils certain times of year. Perched water is not anticipated to be significant, if encountered, and should be manageable with the used of sumps and pumps.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 GENERAL

The soils underlying the project site are generally glacially consolidated in nature and will provide suitable support for the proposed structures. The results of the explorations indicate the presence of medium dense sands in the upper 15 feet, over dense to very dense sand.

Near-surface structures, including the valve vault, which bear on medium dense to dense native sands or structural fill should be designed for allowable bearing pressures up to 4,000 psf. The wet well and any deep manholes bearing on dense or very dense sand will likely weigh less than the soil they displace, however, we recommend their net allowable bearing pressures not exceed 6,000 psf.

The proposed wet well excavation will extend down through sand and will bear on the dense sand. We suggest placing a 6 to 12-inch-thick levelling pad of CSBC beneath their base slabs. We expect the wet well excavation can best be shored using soldier piles and lagging.

4.2 SEISMIC CONSIDERATIONS

4.2.1 Design Parameters

Earthquake loading for the proposed structure was developed in accordance with the General Procedure provided in Section 3.4 of the AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2nd Edition, 2011, and the Washington State Department of Transportation (WSDOT) amendments to the AASHTO Guide Specifications provided in the Bridge Design Manual (LRFD) (WSDOT, 2020). For seismic analysis, the Site Class is required to be established and is determined based on the average soil properties in the upper 100 feet below the ground surface. For this project, SPT blow counts obtained from the borings were utilized to classify the subject site as Seismic Site Class C. Therefore, Site Class C should be used with AASHTO seismic evaluations for this project.

The mapped seismic design coefficients for the design level event, which has a probability of exceedance of 7 percent in 75 years (equal to a return period of 1,033 years), were obtained using BridgeLink, a program developed by WSDOT to incorporate the probabilistic seismic hazard parameters from the 2014 Update of the United States National Seismic Hazard Maps (Petersen, et al., 2014) as well as adopt the site coefficients provided in ASCE 7-16. The recommended seismic coefficients for the design event are provided in Table 2. The spectral acceleration coefficient at 1-second period (SD1) is between 0.3 and 0.5; therefore, Seismic Design Category C, as given by AASHTO Table 3.5-1 (AASHTO, 2020), should be used.

Table 2.
Seismic Coefficients Using AASHTO Guide Specifications
Calculated by BridgeLink

Period (sec)	Mapped AASHTO LRFD Spectral Response Acceleration (g)		Site Coefficients		Design Spectral Response Acceleration (g)		Seismic Design Category
0.0	PGA	0.388	F_{PGA}	1.200	A_s	0.466	**C**
0.2	S_s	0.878	F_a	1.200	S_{DS}	1.054	
1.0	S_1	0.256	F_v	1.500	S_{D1}	0.384	

Notes: Table values from longitude 47.7008° N and latitude 122.1648° W.

4.2.2 Ground Rupture

The site is located about 1.2 miles southwest of the southernmost fault within the Southern Whidbey Island Fault Zone (SWIFZ). There is no evidence from Lidar and gravity anomaly mapping that inferred fault traces may intersect the project site. Based on this information, we anticipate the likelihood of surface rupture at the project site to be low.

4.2.3 LIQUEFACTION

Liquefaction is a temporary loss of soil shear strength due to earthquake shaking. Loose, saturated cohesionless soils are the most susceptible to earthquake-induced liquefaction; however, recent experience and research has shown that certain silts and low-plasticity clays are also susceptible. Primary factors controlling the development of liquefaction include the intensity and duration of strong ground motions, the characteristics of subsurface soils, in-situ stress conditions and the depth to ground water. Because of the dense nature of the soils at the pumpstation site and the depth of ground water, soil liquefaction is not considered a design concern for the lift station.

4.3 LATERAL EARTH PRESSURES

Design pressures for temporary shoring are presented on Figure 3 of this report. Also included on Figure 3 are lateral pressures for surcharge loadings due to traffic loads. The surcharge pressures from traffic loads should be added to the recommended lateral pressures for permanent structures described below.

The proposed wet well and manholes, vaults and other permanent buried structures should be designed to resist at-rest earth pressures plus appropriate surcharge loads due to potential hydro-static, seismic, construction loads (materials and construction equipment) and eventual traffic loads. We recommend permanent structures be designed for an equivalent fluid pressure of 90 pcf, plus an appropriate lateral surcharge load due to potential traffic (from Figure 3). This design pressure includes an at-rest earth pressure of 55 pcf (equivalent fluid pressure) and a combined surcharge loading for possible seismic and hydrostatic loads.

Although the ground water level is well below the bottom of the proposed structure, we assume that backfill immediately around the structure could temporarily become saturated by local infiltration during periods of heavy rainfall. We assume this saturation would not occur simultaneously with a seismic load.

Temporary structures such as shoring that will be used for periods of less than one year can use an active equivalent fluid pressure of 35 pcf for design, plus the appropriate surcharge pressure from surface loads. Passive pressures can be assumed to have equivalent fluid pressure of 360 pcf.

Note that these are ultimate pressures and do not include factors of safety. Designers should incorporate appropriate factors of safety into their calculations.

4.4 DEWATERING

The ground water level is well below the proposed excavation depths and ground water is not expected to be encountered during construction.

Surface runoff should be controlled and not allowed to flow into excavations. We recommend that best management practices (BMP) and the recommendations in section 4.5.4 of this report be implemented as needed to control surface runoff.

4.5 EARTHWORK

4.5.1 Structural Fill

Materials used as backfill for the project are considered "Structural Fill". Structural fill should consist of relatively clean, free-draining, granular soils which are free from organic matter or other deleterious materials. Such materials should be less than 2 inches in maximum particle dimension and contain less than 15 percent fines (portion passing the U.S. Standard No. 200 sieve). The fine-grained portion of structural fill soils should be non-plastic.

The onsite soils consist mostly of sand and are generally suitable for reuse as structural fill for this project. Some of the onsite soils had relatively high fines contents which may make them moisture sensitive and as such they may be difficult or impossible to properly compact when wet of optimum.

4.5.2 Compaction

Structural fill soils should be moisture conditioned and compacted to at least 95 percent of their maximum density in accordance with ASTM D 1557 (Modified Proctor). Achievement of proper density of a compacted fill depends on the size and type of compaction equipment, the number of passes, thickness of the layer being compacted, and soil moisture-density properties. In areas where limited space restricts the use of heavy equipment, smaller equipment can be used, but the soil must be placed in thin enough layers to achieve the required relative compaction. We recommend lift thicknesses not exceed 8 inches.

4.5.3 Temporary Excavation

Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. All temporary excavations more than 4 feet in depth must be sloped in accordance with Part N of WAC (Washington Administrative Code) 296-155 or be shored. The soils within the upper 15 feet classify as Type C soil, for which the WAC requires

that unsupported excavations should be inclined no steeper than 1.5H:1V. Soils deeper than 15 feet at this site are generally consistent with Type B for which the WAC requires that unsupported excavations should be inclined no steeper than 1H:1V. These sloping requirements assume that adequate dewatering has been provided to maintain stable slopes during excavation. Flatter slopes may be necessary where near surface runoff or ground water impacts the stability of the temporary slopes. The slopes should be monitored, and slope angles adjusted in the field based on local subsurface conditions and the contractor's methods.

Space constraints and the proximity of the nearby roadways will likely preclude the sloping of excavations deeper than about 4 feet. Soldier piles and lagging or a similar shoring system will likely be required to support the wet well excavation. The design, installation, maintenance, and removal of temporary shoring should be the responsibility of the contractor. The shoring system should be designed by a qualified and licensed engineer experienced with shoring design for deep excavations within similar soil conditions. We recommend that the design of the temporary shoring system be submitted by the contractor, for approval, prior to starting excavation.

4.5.4 Wet Weather Earthwork

General recommendations relative to earthwork performed in wet weather or in wet conditions are presented below. These recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation of unsuitable and/or softened soil should be followed promptly by placement and compaction of clean structural fill. The size and type of construction equipment used may need to be limited to prevent soil disturbance.
- Material used as excavation backfill in wet weather should consist of clean granular soil with less than 5 percent passing the U.S. No. 200 sieve, based on wet sieving the fraction passing the ¾-inch sieve. The fines should be non-plastic. It should be noted this is an additional restriction on the structural fill materials specified.
- The ground surface within the construction area should be graded to promote surface water run-off and to prevent ponding.
- Within the construction area, the ground surface should be sealed on completion of each shift by a smooth drum vibratory roller, or equivalent, and under no circumstances should soil be left uncompacted and exposed to moisture infiltration.
- Excavation and placement of backfill materials should be monitored by a geotechnical engineer experienced in wet weather earthwork to determine that the work is being accomplished in accordance with the project specifications and the recommendations contained herein.

5. CONDITIONS AND LIMITATIONS

We have prepared this report for David Evans & Associates, Inc. and the City of Kirkland for use in design of this project. The conclusions and interpretations presented in this report should not be construed as our warranty of subsurface conditions at the site. Experience has shown that soil and ground water conditions can vary significantly over small distances and with time. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study of this scope and nature.

Within the limitations of approved scope, schedule and budget, HWA attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, express or implied, is made.

HWA does not practice or consult in the field of safety engineering. We do not direct the contractor's operations and cannot be responsible for the safety of personnel other than our own on the site. As such, the safety of others is the responsibility of the contractor. However, the contractor should notify the owner if any of the recommended actions presented herein are considered unsafe.

We appreciate the opportunity to provide geotechnical services on this project. Should you have any questions or comments, or if we may be of further service, please do not hesitate to call.

Sincerely,

HWA GEOSCIENCES INC.

Ralph N. Boirum, P.E.
Geotechnical Engineer, Principal

Brad W. Thurber, L.G., L.E.G.
Senior Engineering Geologist

6. LIST OF REFERENCES

American Association of State Highway and Transportation Officials, 2020, *AASHTO Guide Specifications for LRFD Seismic Bridge Design*, 2nd Edition, American Association of State Highway and Transportation Officials. Washington, DC.

Minard, James P., 1983, *Geologic Map of the Kirkland Quadrangle, Washington:* USGS, Misc. Field Studies Map MF-1543, scale 1: 24,000.

Petersen, M.D., Moschetti, M.P., Powers, P.M., Mueller, C.S., Haller, K.M., Frankel, A.D., Zeng, Yuehua, Rezaeian, Sanaz, Harmsen, S.C., Boyd, O.S., Field, Ned, Chen, Rui, Rukstales, K.S., Luco, Nico, Wheeler, R.L., Williams, R.A., and Olsen, A.H., 2014, *Documentation for the 2014 update of the United States national seismic hazard maps*, U.S. Geological Survey Open-File Report 2014–1091, 243 p.

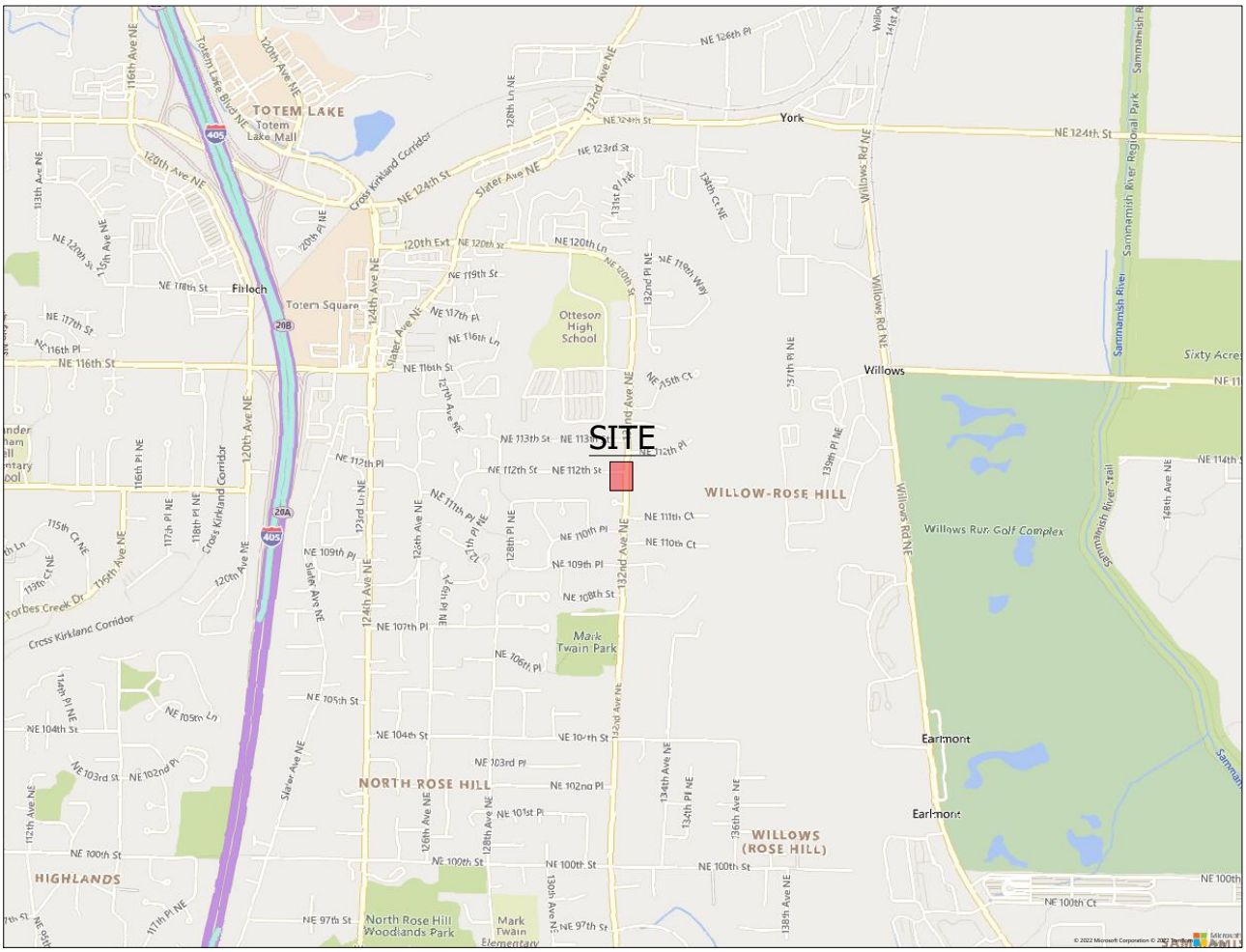
Washington State Dept. of Transportation (WSDOT), 2021, *Bridge Design Manual (LRFD)*, M23-50.17, July 2019.

Washington State Dept. of Transportation (WSDOT), 2022, *Standard Specifications for Road, Bridge, and Municipal Construction:* Pub. No. M41-10 dated August 2021.

SITE MAP

0 200' 400' 600' 800'

SCALE: 1" = 400'



VICINITY MAP

0 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

GEOSCIENCES INC.
DBE/MWBE

SITE AND VICINITY MAP

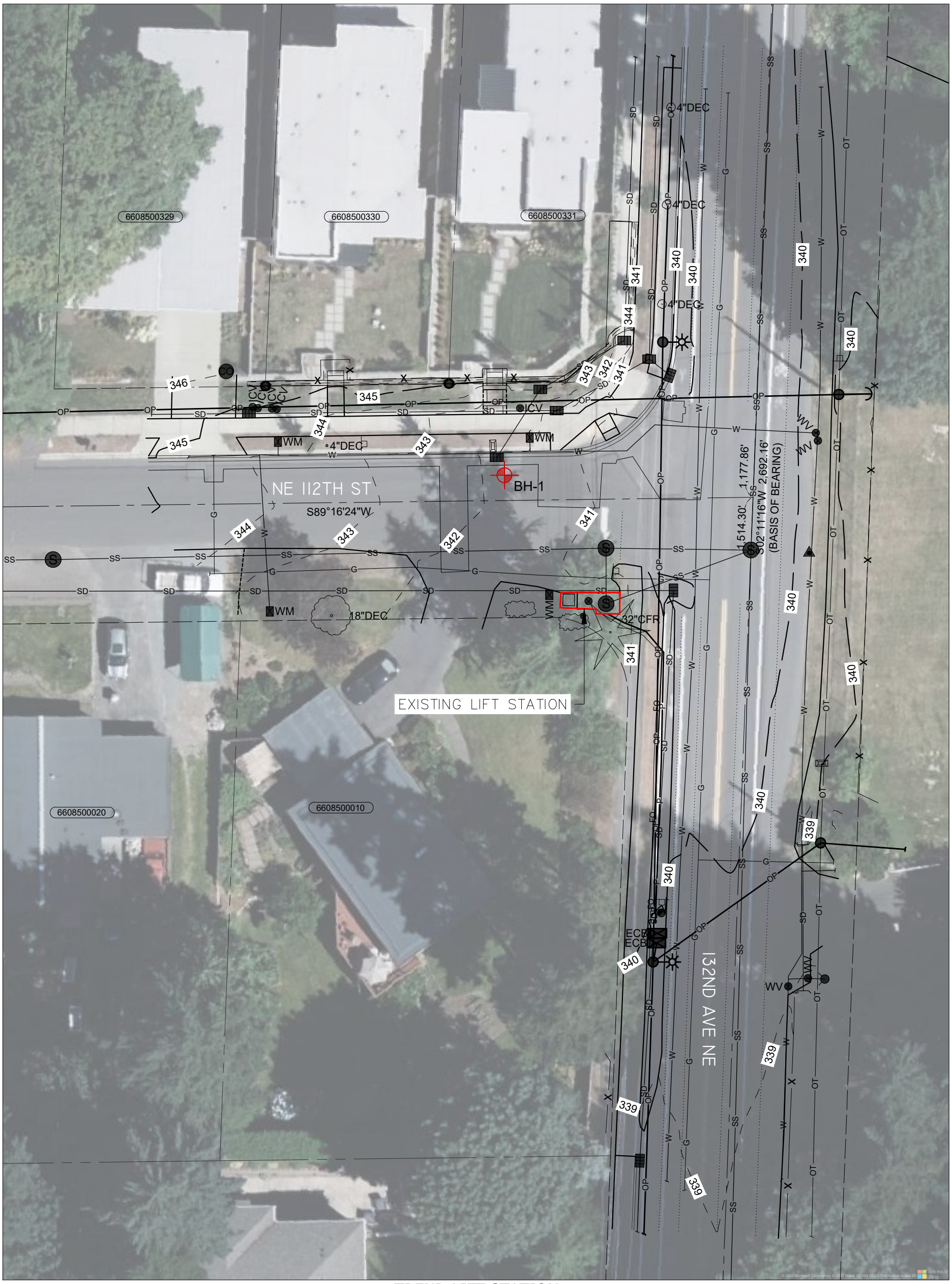
TREND LIFT STATION
KIRKLAND, WASHINGTON

FIGURE NO.: 1

DRAWN BY: CF
CHECK BY: BWT

PROJECT # 2021-143-21

C:\USERS\CFRY\DESKTOP\2021-143-21 KIRKLAND TREND LIFT STATION\2021-143-21 KIRKLAND TREND LIFT STATION.DWG <1> Plotted: 4/24/2022 5:04 PM



TREND LIFT STATION

Scale: 1" = 25'-0"

EXPLORATION LEGEND

BH-1 ⊕ BOREHOLE DESIGNATION AND APPROXIMATE LOCATION

N

0 12.5 25 37.5 50

SCALE: 1" = 25'

BASE MAP PROVIDED BY: BING AND DEA 4.15.2022

GeoSciences Inc. DBE/MWBE

TREND LIFT STATION
KIRKLAND, WASHINGTON

SITE & EXPLORATION PLAN

DRAWN BY:	FIGURE NO.:
CF	2
CHECK BY:	PROJECT NO.:
BWT	2021-143-21

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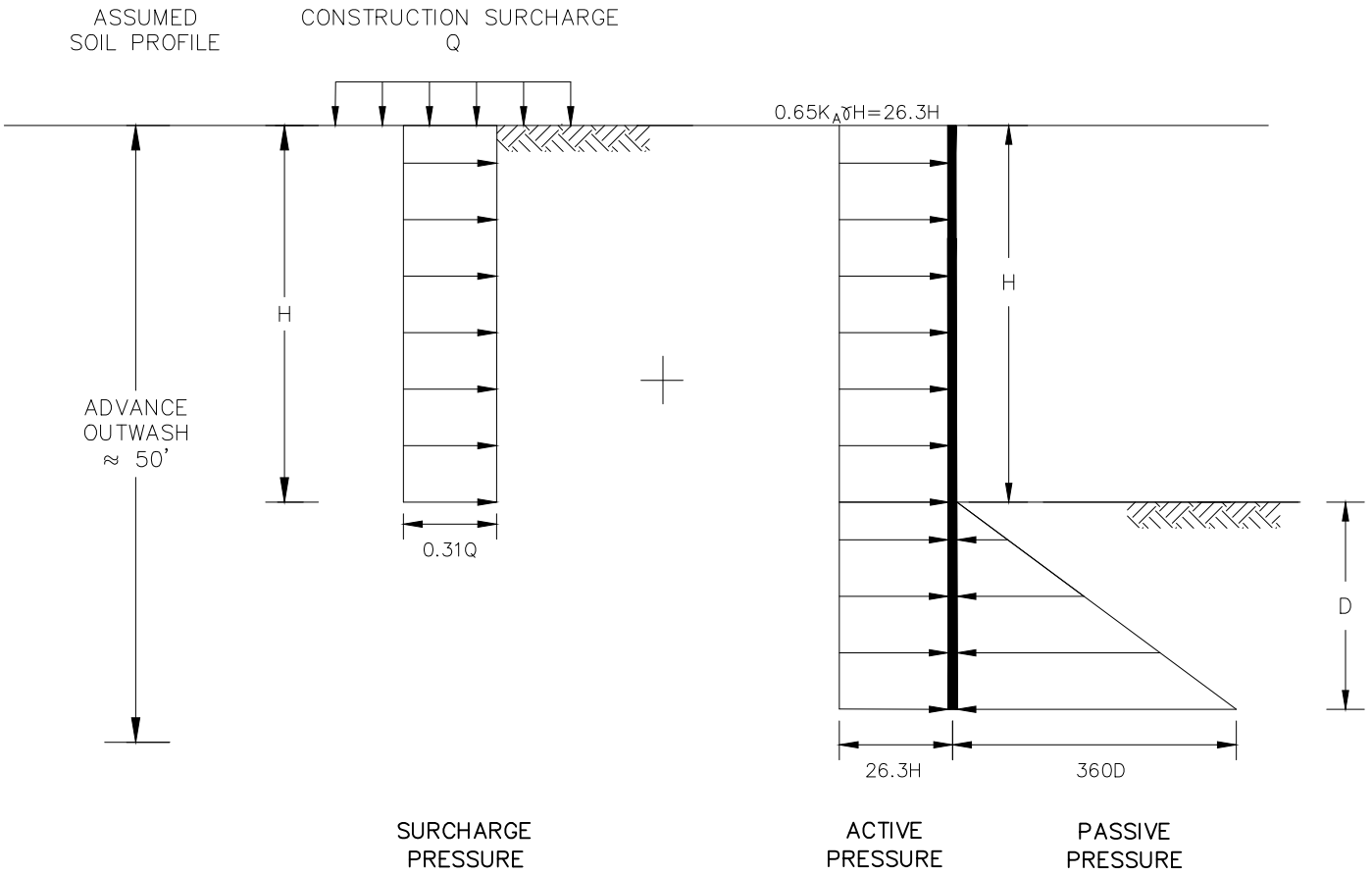

NOTES:

1. Design pressures are in units of psf; distances units of feet.

2. Surcharge load should be adjusted based on the anticipated traffic surcharge. Additional surcharge loads including construction equipment should be included, where appropriate.

3. The surcharge pressure shown above is appropriate for design of temporary (shoring) and permanent structures.

4. Embedment (D) should be determined by summation of moments below base of the excavation.

5. A factor of safety has not been applied to the recommended passive earth pressure values.

GeoSciences Inc.
DBE/MWBE

LATERAL EARTH PRESSURES
FOR TEMPORARY SHORING

TREND LIFT STATION
KIRKLAND, WASHINGTON

FIGURE NO.: 3

DRAWN BY: CF
CHECK BY: BWT

PROJECT # 2021-143-21

APPENDIX A

FIELD EXPLORATION

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

COHESIONLESS SOILS			COHESIVE SOILS		
Density	N (blows/ft)	Approximate Relative Density(%)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	0 - 15	Very Soft	0 to 2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	35 - 65	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	over 30	>4000

USCS SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP DESCRIPTIONS	
Coarse Grained Soils	Gravel and Gravelly Soils	Clean Gravel (little or no fines)	GW	Well-graded GRAVEL
	More than 50% of Coarse Fraction Retained on No. 4 Sieve		GP	Poorly-graded GRAVEL
		Gravel with Fines (appreciable amount of fines)	GM	Silty GRAVEL
			GC	Clayey GRAVEL
More than 50% Retained on No. 200 Sieve Size	Sand and Sandy Soils	Clean Sand (little or no fines)	SW	Well-graded SAND
	50% or More of Coarse Fraction Passing No. 4 Sieve		SP	Poorly-graded SAND
		Sand with Fines (appreciable amount of fines)	SM	Silty SAND
			SC	Clayey SAND
Fine Grained Soils	Silt and Clay	Liquid Limit Less than 50%	ML	SILT
			CL	Lean CLAY
			OL	Organic SILT/Organic CLAY
50% or More Passing No. 200 Sieve Size	Silt and Clay	Liquid Limit 50% or More	MH	Elastic SILT
			CH	Fat CLAY
			OH	Organic SILT/Organic CLAY
Highly Organic Soils			PT	PEAT

TEST SYMBOLS

%F	Percent Fines
AL	Atterberg Limits: PL = Plastic Limit, LL = Liquid Limit
CBR	California Bearing Ratio
CN	Consolidation
DD	Dry Density (pcf)
DS	Direct Shear
GS	Grain Size Distribution
K	Permeability
MD	Moisture/Density Relationship (Proctor)
MR	Resilient Modulus
OC	Organic Content
pH	pH of Soils
PID	Photoionization Device Reading
PP	Pocket Penetrometer (Approx. Comp. Strength, tsf)
Res.	Resistivity
SG	Specific Gravity
CD	Consolidated Drained Triaxial
CU	Consolidated Undrained Triaxial
UU	Unconsolidated Undrained Triaxial
TV	Torvane (Approx. Shear Strength, tsf)
UC	Unconfined Compression

SAMPLE TYPE SYMBOLS

- 2.0" OD Split Spoon (SPT) (140 lb. hammer with 30 in. drop)
- Shelby Tube
- Non-standard Penetration Test (3.0" OD Split Spoon with Brass Rings)
- Small Bag Sample
- Large Bag (Bulk) Sample
- Core Run
- 3-1/4" OD Split Spoon

GROUNDWATER SYMBOLS

- Groundwater Level (measured at time of drilling)
- Groundwater Level (measured in well or open hole after water level stabilized)

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5 mm) to No. 200 (0.074 mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

COMPONENT PROPORTIONS

PROPORTION RANGE	DESCRIPTIVE TERMS
< 5%	Clean
5 - 12%	Slightly (Clayey, Silty, Sandy)
12 - 30%	Clayey, Silty, Sandy, Gravelly
30 - 50%	Very (Clayey, Silty, Sandy, Gravelly)
Components are arranged in order of increasing quantities.	

NOTES: Soil classifications presented on exploration logs are based on visual and laboratory observation.
Soil descriptions are presented in the following general order:

Density/consistency, color, modifier (if any) GROUP NAME, additions to group name (if any), moisture content. Proportion, gradation, and angularity of constituents, additional comments. (GEOLOGIC INTERPRETATION)

Please refer to the discussion in the report text as well as the exploration logs for a more complete description of subsurface conditions.

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
MOIST	Damp but no visible water.
WET	Visible free water, usually soil is below water table.

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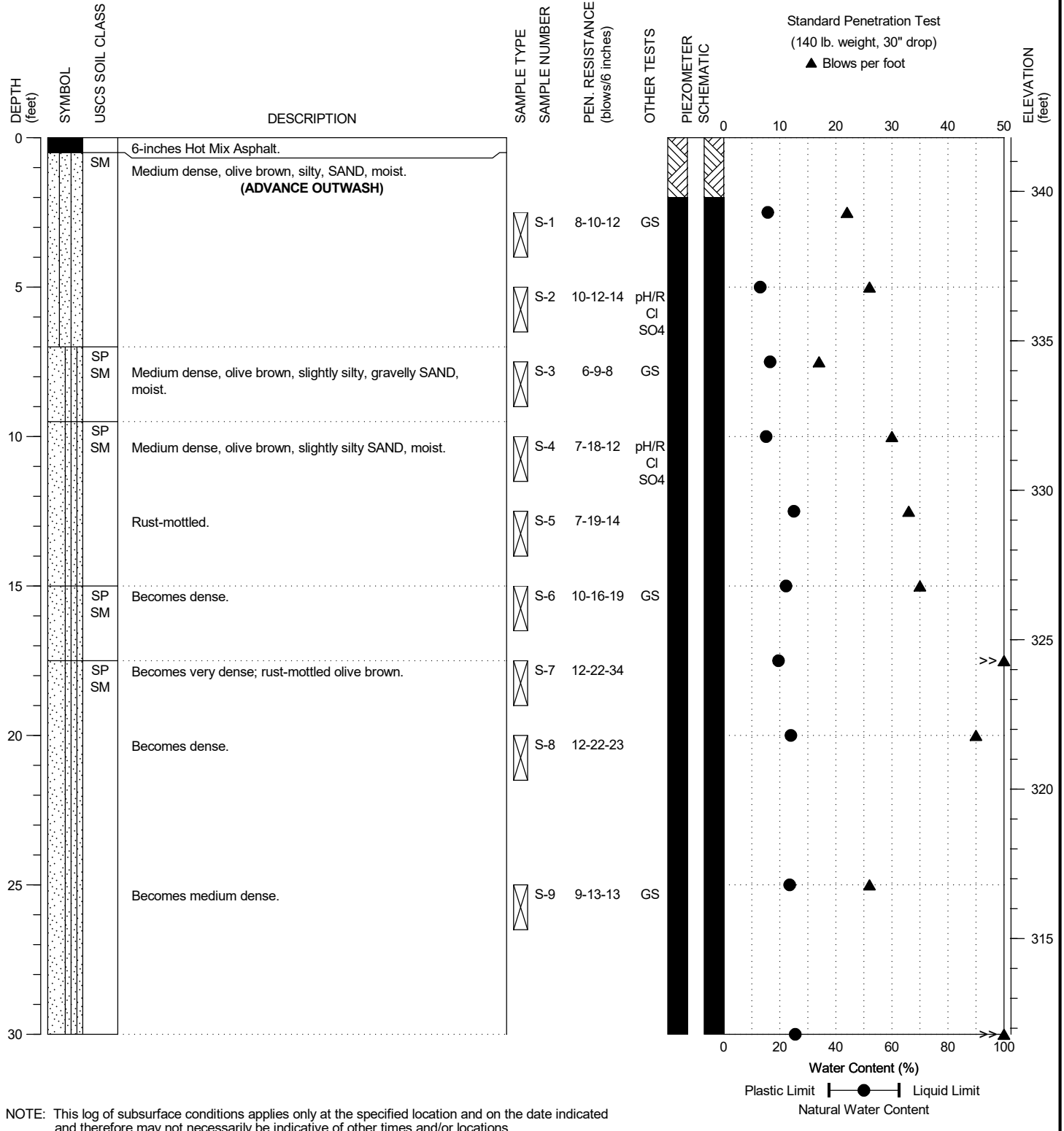
LEGEND OF TERMS AND SYMBOLS USED ON EXPLORATION LOGS

PROJECT NO.: 2021-143-21 FIGURE: A-1

DRILLING COMPANY: Advance Drill Technologies, Inc.
DRILLING METHOD: Hollow Stem Auger, Dietrich D-50 Track Rig
SAMPLING METHOD: SPT w/Autohammer
LOCATION: See Figure 2

DATE STARTED: 4/8/2022
DATE COMPLETED: 4/8/2022
LOGGED BY: A.Mahmoud
SURFACE ELEVATION: 341.8 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

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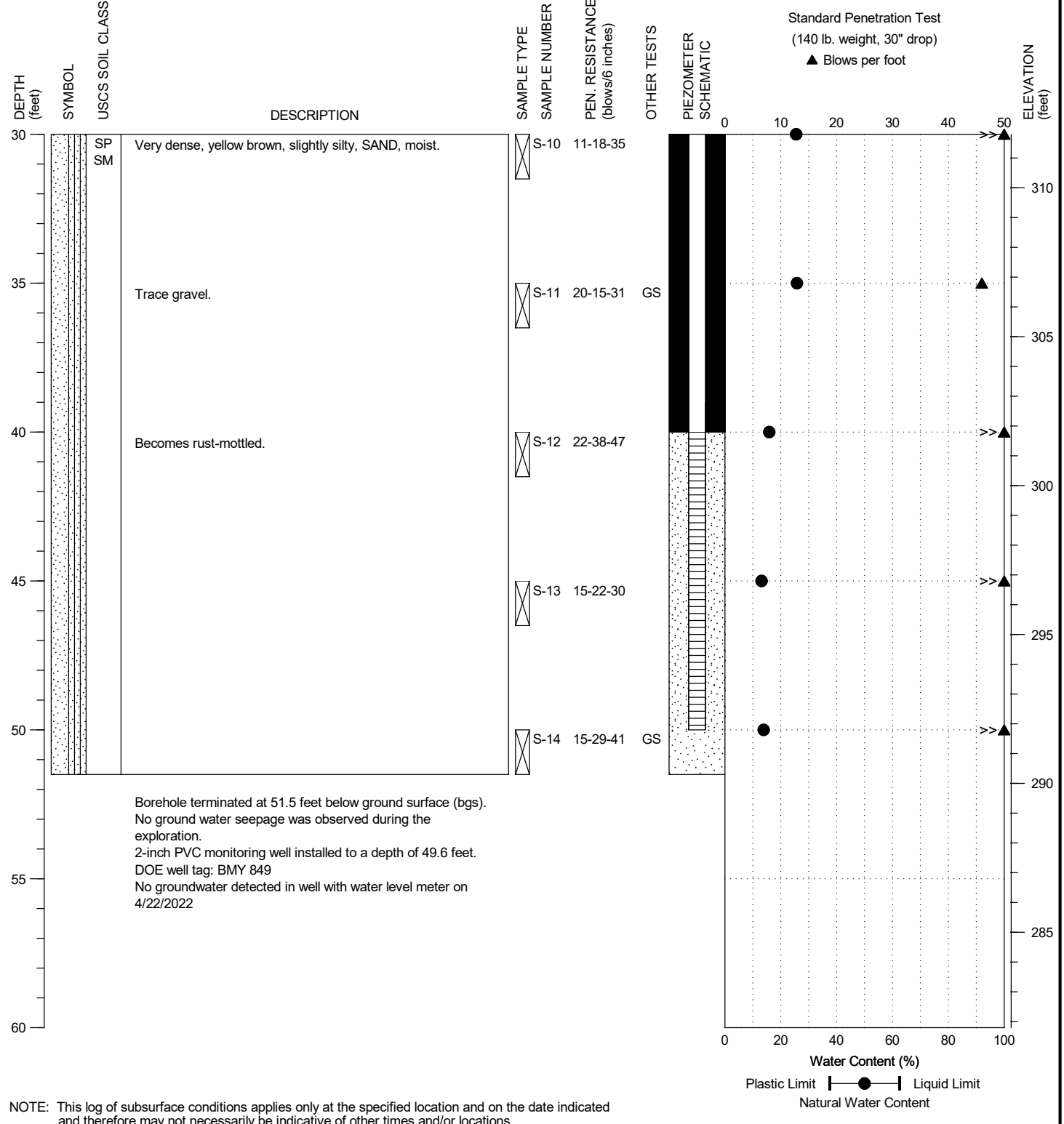
BORING:
BH-1

PROJECT NO.: 2021-143-21 FIGURE: A-2

PZO-DSM 2021-143-21.GPJ 4/26/22

DRILLING COMPANY: Advance Drill Technologies, Inc.
DRILLING METHOD: Hollow Stem Auger, Dietrich D-50 Track Rig
SAMPLING METHOD: SPT w/Autohammer
LOCATION: See Figure 2

DATE STARTED: 4/8/2022
DATE COMPLETED: 4/8/2022
LOGGED BY: A.Mahmoud
SURFACE ELEVATION: 341.8 ± feet



Borehole terminated at 51.5 feet below ground surface (bgs).
No ground water seepage was observed during the exploration.
2-inch PVC monitoring well installed to a depth of 49.6 feet.
DOE well tag: BMY 849
No groundwater detected in well with water level meter on 4/22/2022

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

Trend Lift Station
Kirkland, Washington

BORING:
BH-1

PROJECT NO.: 2021-143-21 FIGURE: A-2

PZO-DSM 2021-143-21.GPJ 4/26/22

APPENDIX B

LABORATORY PROGRAM

APPENDIX B

LABORATORY PROGRAM

Representative soil samples obtained from our explorations were placed in plastic bags to prevent loss of moisture and transported to our Bothell, Washington, laboratory for further examination and testing. Laboratory tests were conducted on selected soil samples to characterize relevant engineering and index properties of the site soils. Laboratory testing was conducted as described below: A Summary of Material Properties is provided on Figure B-1.

MOISTURE CONTENT: Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 105^0 C). The test results are presented on the borehole logs and on the attached Summary of Material Properties, Figure B-1. The results are percent by weight of dry soil.

PARTICLE SIZE ANALYSIS OF SOILS: Selected samples were tested to determine the particle (grain) size distribution of material in general accordance with ASTM D 422. The results are summarized on the attached Particle Size Analysis of Soils report, Figure B-2, which also provides information regarding the classification of the sample, and the moisture content at the time of testing.

pH AND RESISTIVITY TEST RESULTS: Testing was carried out on selected samples using WSDOT Test Method No. 417. The indicated pH and minimum resistivity of the samples are shown in Figure B-1.

CHLORIDE AND SULFATE TEST RESULTS: Testing was carried out on selected samples using EPA methods. The indicated Chloride and Sulfate of the samples are shown in Figures B-4 and B-5.

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	pH	MINIMUM RESISTIVITY (ohm-cm)	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
								LL	PL	PI					
BH-1,S-1	2.5	4.0	15.7								1.4	78.7	19.9	SM	Olive-brown, silty SAND
BH-1,S-2	5.0	6.5	13.0			6.0	12,000							SM	Olive-brown, silty SAND
BH-1,S-3	7.5	9.0	16.5								12.9	76.1	11.0	SP-SM	Dark grayish-brown, poorly graded SAND with silt
BH-1,S-4	10.0	11.5	15.1			5.8	11,000							SM	Dark grayish-brown, silty SAND
BH-1,S-5	12.5	14.0	25.0											SM	Dark grayish-brown, silty SAND
BH-1,S-6	15.0	16.5	22.2								0.1	92.6	7.4	SP-SM	Dark grayish-brown, poorly graded SAND with silt
BH-1,S-7	17.5	19.0	19.5											SP-SM	Olive-brown, poorly graded SAND with silt
BH-1,S-8	20.0	21.5	23.9											SM	Dark grayish-brown, silty SAND
BH-1,S-9	25.0	26.5	23.5									92.0	8.0	SP-SM	Olive-brown, poorly graded SAND with silt
BH-1,S-10	30.0	31.5	25.5											SM	Olive-brown, silty SAND
BH-1,S-11	35.0	36.5	25.8								1.6	88.6	9.7	SP-SM	Olive-brown, poorly graded SAND with silt
BH-1,S-12	40.0	41.5	15.9											SP-SM	Olive-brown, poorly graded SAND with silt
BH-1,S-13	45.0	46.5	13.1											SP-SM	Olive-brown, poorly graded SAND with silt
BH-1,S-14	50.0	51.5	13.9									93.0	7.0	SP-SM	Olive-brown, poorly graded SAND with silt

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

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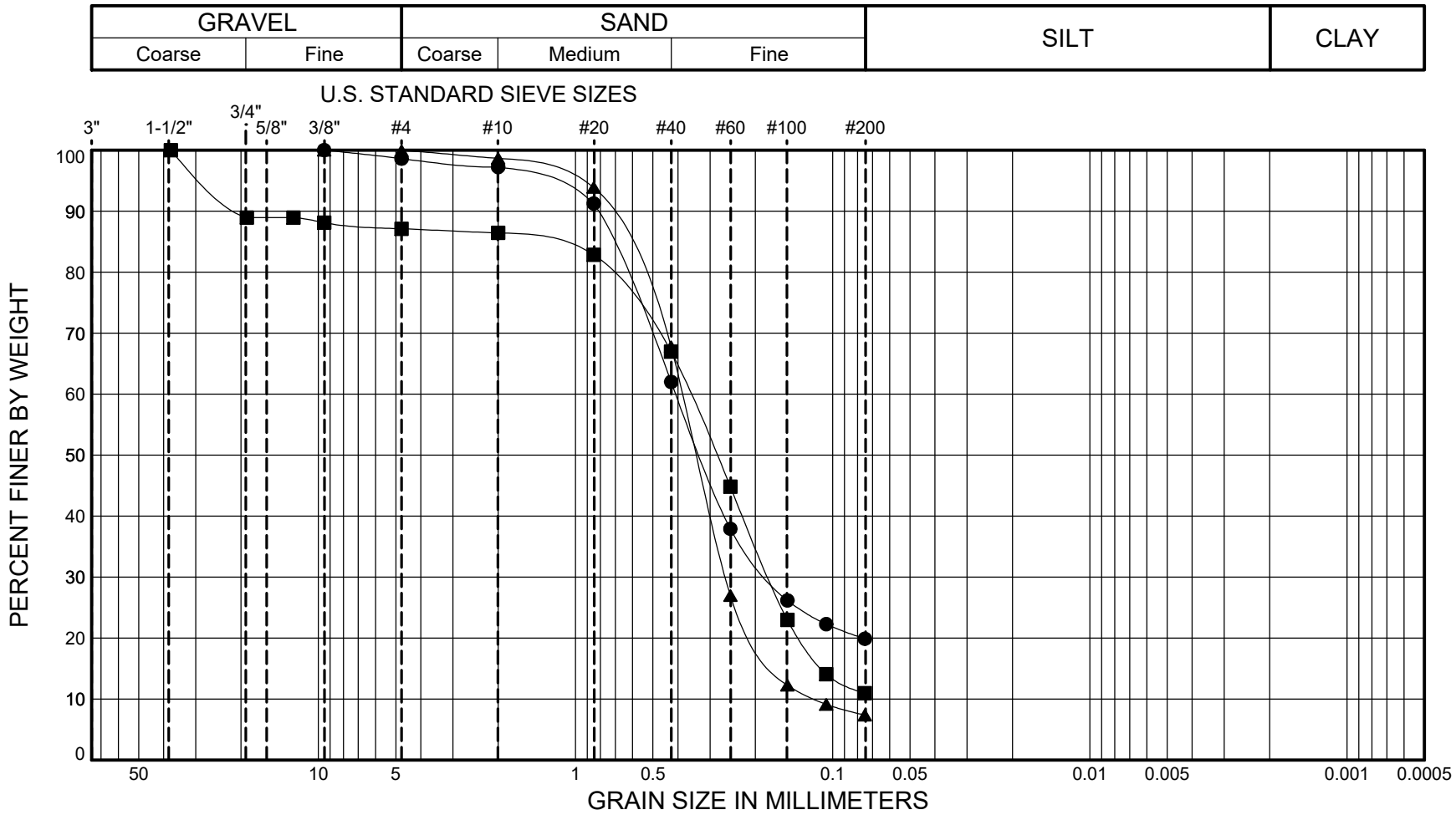
SUMMARY OF MATERIAL PROPERTIES

PROJECT NO.: 2021-143-21 FIGURE: B-1



SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-1	S-1	2.5 - 4.0	(SM) Olive-brown, silty SAND	16				1.4	78.7	19.9
■	BH-1	S-3	7.5 - 9.0	(SP-SM) Dark grayish-brown, poorly graded SAND with silt	17				12.9	76.1	11.0
▲	BH-1	S-6	15.0 - 16.5	(SP-SM) Dark grayish-brown, poorly graded SAND with silt	22				0.1	92.6	7.4

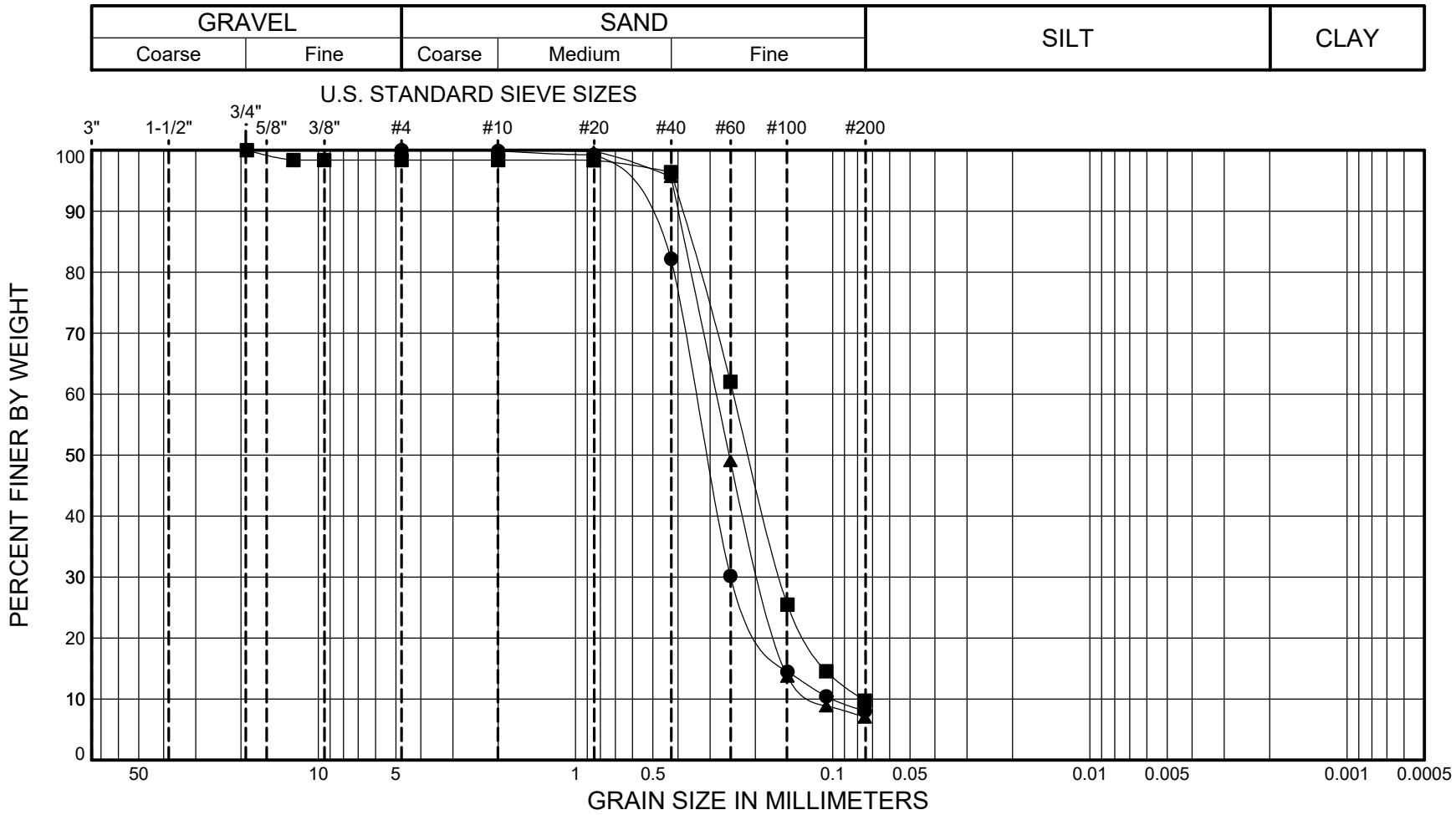
HWA GeoSciences Inc.

Trend Lift Station
Kirkland, Washington

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2021-143-21 FIGURE: B-2

HWAGRSZ 2021-143-21.GPJ 4/21/22



SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-1	S-9	25.0 - 26.5	(SP-SM) Olive-brown, poorly graded SAND with silt	24					92.0	8.0
■	BH-1	S-11	35.0 - 36.5	(SP-SM) Olive-brown, poorly graded SAND with silt	26				1.6	88.6	9.7
▲	BH-1	S-14	50.0 - 51.5	(SP-SM) Olive-brown, poorly graded SAND with silt	14					93.0	7.0

HWA GeoSciences Inc.

Trend Lift Station
Kirkland, Washington

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2021-143-21 FIGURE: B-3

HWAGRSZ 2021-143-21.GPJ 4/21/22

Soil PAP NAPT 2022

soiltest farm consultants, inc.
2925 Driggs Dr., Moses Lake, Wa 98837 - www.soiltestlab.com
Office: (509)765-1622 - Fax:(509)765-0314 - (800)764-1622

Soil & Plant Program 2022 NAPT Participating Laboratory

HWA GEOSCIENCES
21312 30TH DRIVE SE, STE 110

BOTHELL , WA 98021

Laboratory #: S22-06548

Date Received: 4/19/2022
Grower: 2021-143 T1100
Field: BH-1 S-2
Sampled By:
Customer Account #:
Customer Sample ID:

Soil Test Results

Chloride	Soluble I	mg/kg	14

pH 1:1
E.C. 1:1 m.mhos/cm
Est Sat Paste E.C. m.mhos/cm
Effervescence

Ammonium - N mg/kg
Organic Matter W.B. %

Depth inches	Nitrate-N mg/kg		Sulfate-S mg/kg	Moisture Inches
0 - 12			1	
Totals			**1**	

Other Tests:

We make every effort to provide an accurate analysis of your sample. For reasonable cause we will repeat tests, but because of factors beyond our control in sampling procedures and the inherent variability of soil, our liability is limited to the price of the tests. Recommendations are to be used as general guides and should be modified for specific field conditions and situations. Note: "u" indicates that the element was analyzed for but not detected

This is your Invoice #: S22-06548 Account #: 188200 Reviewed by: James Graff List Cost: $26.00

Trend Lift Station
Kirkland, Washington

Figure B-4

soiltest farm consultants, inc.
2925 Driggs Dr., Moses Lake, Wa 98837 - www.soiltestlab.com
Office: (509)765-1622 - Fax:(509)765-0314 - (800)764-1622

HWA GEOSCIENCES
21312 30TH DRIVE SE, STE 110

BOTHELL , WA 98021

Laboratory #: S22-06549

Date Received: 4/19/2022
Grower: 2021-143 T1100
Field: BH-1 S-4
Sampled By:
Customer Account #:
Customer Sample ID:

Soil Test Results

Chloride	Soluble I	mg/kg	2

pH 1:1
E.C. 1:1 m.mhos/cm
Est Sat Paste E.C. m.mhos/cm
Effervescence

Ammonium - N mg/kg
Organic Matter W.B. %

Depth inches	Nitrate-N mg/kg		Sulfate-S mg/kg	Moisture Inches
0 - 12			2	
Totals			**2**	

Other Tests:

We make every effort to provide an accurate analysis of your sample. For reasonable cause we will repeat tests, but because of factors beyond our control in sampling procedures and the inherent variability of soil, our liability is limited to the price of the tests. Recommendations are to be used as general guides and should be modified for specific field conditions and situations. Note: "u" indicates that the element was analyzed for but not detected

This is your Invoice #: S22-06549 Account #: 188200 Reviewed by: James Graff List Cost: $26.00

Trend Lift Station
Kirkland, Washington

Figure B-5